R R Institute of Technology
Computer Science & Engg.

Part A : Institutional Information

1 Name and Address of the Institution

R R Institute of Technology,
Raja Reddy Layout, Heseraghatta Main Road, Near Chikkabanavara Railway Station, Chikkabanavara Bangalore – 560 090

2 Name and Address of Affiliating University

Visvesvaraya Technological University

3 Year of establishment of the Institution:

2008

4 Type of the Institution:

☐ University	☐ Autonomous
☐ Deemed University	☑ Affiliated
☐ Government Aided	

5 Ownership Status:

☐ Central Government	☑ Trust
☐ State Government	☐ Society
☐ Government Aided	☐ Section 25 Company
☐ Self financing	☐ Any Other(Please Specify)

6 Other Academic Institutions of the Trust/Society/Company etc., if any:

Name of Institutions	Year of Establishment	Programs of Study	Location
National Public School	2014	School	RR Campus, Chikkabanavara, Bengaluru
RR School of Architecture	2014	Bachelor of Architecture	RR Campus, Chikkabanavara, Bengaluru
RR Polytechnic	2010	Diploma in Engineering	RR Campus, Chikkabanavara, Bengaluru
RR Institute of Advanced Studies	2009	Master of Business Administration	RR Campus, Chikkabanavara, Bengaluru
RR Institute of Management Studies	2011	B.Com, BBA (Aviation), BBA (Logistics), BCA (Cloud Computing), B.Com Tourism & Travel Management - Aviatioin (IATA)	RR Campus, Chikkabanavara, Bengaluru
RR college of Education	2004	B.Ed	RR Campus, Chikkabanavara, Bengaluru
RR College of Pharmacy	2008	D.Pharm, B.Pharm, M.Pharm (Pharmaceutics, Pharmacognosy), Pharm. D, Post Baccalaureate courses	RR Campus, Chikkabanavara, Bengaluru
RR College and School of Nursing	2004	B.Sc & M.Sc in Nursing, PB.B.Sc. Nursing, GNM, Research Centre in Ph.D	RR Campus, Chikkabanavara, Bengaluru
Manjunatha College and School of Nursing	2003	B.Sc & M.Sc in Nursing, PB.B.Sc. Nursing, GNM, Research Centre in Ph.D	RR Campus, Chikkabanavara, Bengaluru
RR Institute of Medical Sciences	2016	B.Sc. in Optometry Technology, Radiotherapy Technology, Perfusion Technology, Radiography and Imaging Technology, Cardia Care Technology, OTT & Anesthesia Technology	RR Campus, Chikkabanavara, Bengaluru
NRR Hospital College and School Nursing	2018	B.Sc. in Optometry Technology, Radiotherapy Technology, Perfusion Technology, Radiography and Imaging Technology, Cardia Care Technology, OTT & Anesthesia Technology	RR Campus, Chikkabanavara, Bengaluru
NRR Hospital	2008	Multi Specialty health services	Hesarghatta Road, Chikkabanavara, Bengaluru
Prakriya Hospital	2019	Multi Specialty health services	Nagasandra, Tumkur Road
National Academy of Learning	2017	Pre-University	RR Campus, Chikkabanavara, Bengaluru
Rainbow International School	2018	School	Abhiggere main road, Chikkabanavara, Bengaluru
Little Millennium	2018	School	Abhiggere main road, Chikkabanavara, Bengaluru

7 Details of all the programs being offered by the institution under consideration:

Name of Program	Program Applied level	Start of year	Year of AICTE approval	Initial Intake	Intake Increase	Current Intake	Accreditation status	From	To	Program for consideration	Program for Duration
Computer Science & Engineering	UG	2008	2008	60	No	60	Applying first time	--	--	Yes	4
Electrical & Electronics Engineering	UG	2008	2008	60	No	60	Not eligible for accreditation	--	--	0	4
Mechanical Engineering	UG	2010	2010	60	Yes	120	Not eligible for accreditation	--	--	0	4
Information Science and Engineering	UG	2008	2008	60	No	60	Applying first time	--	--	No	4
Electronics & Communication Engineering	UG	2008	2008	60	Yes	60	Not eligible for accreditation	--	--	No	4

Sanctioned Intake for Last Five Years for the Electronics & Communication Engineering	
Academic Year	Sanctioned Intake
2020-21	60
2019-20	60
2018-19	60
2017-18	120
2016-17	120
2015-16	120

Name of Program	Program Applied level	Start of year	Year of AICTE approval	Initial Intake	Intake Increase	Current Intake	Accreditation status	From	To	Program for consideration	Program for Duration
Civil Engineering	UG	2010	2010	60	No	120	Eligible but not applied	--	--	0	4

8 Programs to be considered for Accreditation vide this application:

S No	Level	Discipline	Program
1	Under Graduate	Engineering & Technology	Civil Engg.
2	Under Graduate	Engineering & Technology	Computer Science & Engg.
3	Under Graduate	Engineering & Technology	Information Science & Engg.

9 Total number of employees in the institution:

A. Regular* Employees (Faculty and Staff):

Items	2020-21		2019-20		2018-19	
	MIN	MAX	MIN	MAX	MIN	MAX
Faculty in Engineering (Male)	43	45	40	43	39	45
Faculty in Engineering (Female)	32	34	34	37	32	39
Faculty in Maths, Science & Humanities (Male)	7	11	10	11	10	13
Faculty in Maths, Science & Humanities (FeMale)	9	9	9	11	6	11
Non-teaching staff (Male)	10	13	20	24	19	24
Non-teaching staff (FeMale)	12	16	10	13	9	13

B. Contractual* Employees (Faculty and Staff):

Items	2020-21		2019-20		2018-19	
	MIN	MAX	MIN	MAX	MIN	MAX
Faculty in Engineering (Male)	2	3	0	0	2	2
Faculty in Engineering (Female)	2	2	0	0	3	3
Faculty in Maths, Science & Humanities (Male)	0	0	0	0	0	0
Faculty in Maths, Science & Humanities (FeMale)	0	0	0	0	1	1
Non-teaching staff (Male)	0	0	0	0	0	0
Non-teaching staff (FeMale)	0	0	0	0	0	0

10 Total number of Engineering Students:

Engineering and Technology- UG	☑ Shift1	☐ Shift2
Engineering and Technology- PG	☐ Shift1	☐ Shift2
Engineering and Technology- Polytechnic	☐ Shift1	☐ Shift2
MBA	☐ Shift1	☐ Shift2
MCA	☐ Shift1	☐ Shift2

Engineering and Technology- UG Shift-1

Items	2020-21	2019-20	2018-19
Total no. of Boys	673	611	711
Total no. of Girls	217	229	285
Total	890	840	996

11 Vision of the Institution:

Vision of RR Institute of Technology (RRIT)

"To be a Premier globally recognized Institute with ensuring academic excellence,Innovation and fostering Research in the field of Engineering."

12 Mission of the Institution:

Mission of RR Institute of Technology (RRIT)

- To consistently strive for Academic Excellence
- To promote collaborative Research & Innovation
- To create holistic teaching learning environment that build ethically sound manpower who contribute to the stake holders operating at Global environment

13 Contact Information of the Head of the Institution and NBA coordinator, if designated:

Head of the Institution	
Name	Dr.Mahendra K V
Designation	Principal
Mobile No.	9591227283
Email ID	rrit@rrinstitutions.com

☐ **NBA Coordinator, If Designated**

PART B: Criteria Summary

Critera No.	Criteria	Total Marks	Institute Marks
1	VISION, MISSION AND PROGRAM EDUCATIONAL OBJECTIVES	60	57.00
2	PROGRAM CURRICULUM AND TEACHING - LEARNING PROCESSES	120	105.00
3	COURSE OUTCOMES AND PROGRAM OUTCOMES	120	106.00
4	STUDENTS' PERFORMANCE	150	97.02
5	FACULTY INFORMATION AND CONTRIBUTIONS	200	140.78
6	FACILITIES AND TECHNICAL SUPPORT	80	69.00
7	CONTINUOUS IMPROVEMENT	50	40.00
8	FIRST YEAR ACADEMICS	50	36.89
9	STUDENT SUPPORT SYSTEMS	50	40.00
10	GOVERNANCE, INSTITUTIONAL SUPPORT AND FINANCIAL RESOURCES	120	95.00
	Total	**1000**	**787**

Part B

1 VISION, MISSION AND PROGRAM EDUCATIONAL OBJECTIVES (60)

Total Marks 57.00

1.1 State the Vision and Mission of the Department and Institute (5)

Total Marks 5.00

Institute Marks : 5.00

Vision of the institute	Vision of RR Institute of Technology (RRIT) "To be a Premier globally recognized Institute with ensuring academic excellence,Innovation and fostering Research in the field of Engineering."
Mission of the institute	Mission of RR Institute of Technology (RRIT) • To consistently strive for Academic Excellence • To promote collaborative Research & Innovation • To create holistic teaching learning environment that build ethically sound manpower who contribute to the stake holders operating at Global environment
Vision of the Department	To arise as an excellent learning center in the field of Computer Science and Engineering by fostering skilled and innovative professionals to build a strong nation.
Mission of the Department	<table><tr><td>**Mission No.**</td><td>**Mission Statements**</td></tr><tr><td>M1</td><td>To provide a conceptual foundation that caters the career required to adopt for changing technology in computer science.</td></tr><tr><td>M2</td><td>To bridge the gap between academics and the latest tools, technologies in the area of hardware and software.</td></tr><tr><td>M3</td><td>To set out co-curricular open doors for student's participation in advancements and recent trends.</td></tr><tr><td>M4</td><td>To explore the potential and excel the students towards research to attain Novelty.</td></tr></table>

1.2 State the Program Educational Objectives (PEOs) (5)

Total Marks 5.00

PEO No.	Program Educational Objectives Statements
PEO1	Proficient to recognize contemporary issues and provide solutions using broad knowledge of computer science.
PEO2	Ability to plan, analyze, design, evolve project implementing capabilities and skills in IT industry.
PEO3	Drive to adapt new computing technologies lifelong to acquire professional greatness.
PEO4	Possess professional, ethical, social responsibilities, communicational skills and team work needed for a successful professional career.

1.3 Indicate where the Vision, Mission and PEOs are published and disseminated among stakeholders (10)   Total Marks 10.00

Institute Marks : 10.00

Sl. No.	Published Places
1	Institute website
2	Course file
3	Alumni Survey forms
4	Employer Survey forms
5	Displayed in Staff & HOD's room
6	Displayed on Department Notice Boards in the Corridors
7	Displayed on Notice Boards of Laboratories & Classrooms
8	Institution/Department Information Newsletter
9	Bluebooks, Records, Observation & Assignment Books
10	Study Materials
11	Seminar Hall

1.4 State the process for defining the Vision and Mission of the Department, and PEOs of the program (25)   Total Marks 25.00

Institute Marks : 25.00

Process of Defining V & M

Step 1: Department Academic Council(DAC) prepare the draft version of Vision & Mission of the department by looking into the Institute level Vision & Mission.

Step 2: Drafted vision and mission statements are shared with the Stakeholders such as faculty, students, alumni, parents and employer for

their views.

Step 3: Incorporate Ideas and suggestions obtained by the stake holders,

If it is not satisfactory again review the vision and mission. This process was repeated until all the stakeholders approved vision & mission statements.

Then the final approval of vision & mission statements is taken from the Department Advisory Board (DAB)

Step 4: Final Vision & Mission.

Step 5: Publish the vision and mission.
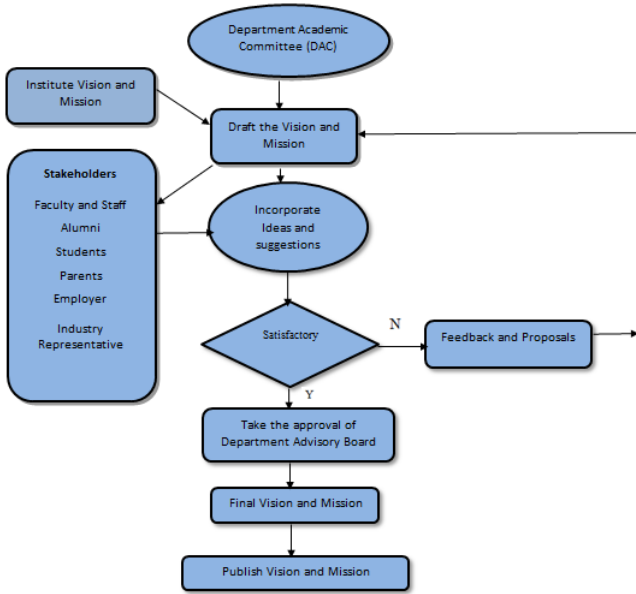
Figure 1.4.1a: Process of V& M

Process for Establishing PEOs

Step 1: Vision and Mission of the Institute and Department are taken as the basis to interact with all the key stake holders.

Step 2: Head of the Department takes the feedback from the Faculty, Students, Employers, Alumni and Teaching learning Environment and prepares the PEOs.

Step 3: Head of the Department reviews and recommends within the guidelines defined for the formulation of the PEOs to Department Academic Council (DAC)

Step 4: DAC finalizes the PEOs and submits to Department Advisory Board.

Figure 1.4.1b: Process of PEOs

1.5 Establish consistency of PEOs with Mission of the Department (15)   Total Marks 12.00

Institute Marks : 12.00

PEO1 is concerned with proficiency of the student to recognize computer science related trends and provide solutions applying the broad knowledge of comp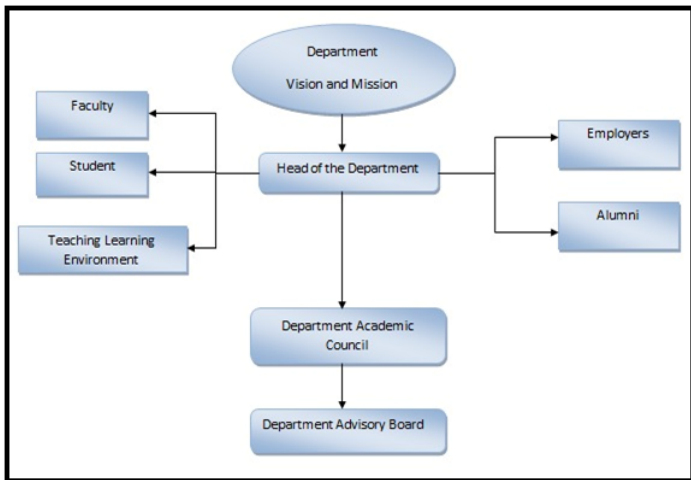uter science, which maps strongly with M1. PEO1 matches slightly with M2, moderately with M3 and M4 as it is concerned with the gap between academics and the latest tools, technologies in hardware and software and concerned with student's participation in advancement of recent trends and research to attain novelty.

PEO2 is concerned with planning, analyzing, designing, evolving project implementing capabilities and skills in IT industry and this maps moderately with M3. Mission M2 focuses on gap between academics and the latest tools, technologies in hardware and software which will be fulfilled by conducting various events. This PEO maps Strongly with M1 & moderately with M2 because the events quality should be the career required to adopt for changing technology in computer science. M4 mainly focuses on students' participation in advanced trends and the research work in novelty where it maps slightly with PEO2.

PEO3 is concerned with Lifelong learning to acquire professional greatness which maps moderately with M1, M2 & M4. This missions are concerned with the challenges to adopt for changing technology. Mission 2 and 4 is mainly concerned with the gap between academics and the latest tools, technologies in the area of hardware and software and to explore the potentiality of the students towards research to attain novelty. Mission

PEO4 is concerned with professional, ethical, social responsibilities, communicational skills and team work needed for a successful professional carrier which slightly maps with M1 & M3, moderately maps with M2 and M4. Mission 2 and 4 is mainly aims to bridge the gap between academics and latest tools, technologies in the area of hardware and software and to explore the potential and excel the students towards research to attain novelty. The M1 & M3 which provides the conceptual foundation to adopt the change in technology and participation in advancement and recent trends.

PEO Statements	M1	M2	M3	M4
Proficient to recognize contemporary issues and provide solutions using broad knowledge of computer science.	3	1	2	2
Ability to plan, analyze, design, evolve project implementing capabilities and skills in IT industry.	3	2	2	1
Drive to adapt new computing technologies lifelong to acquire professional greatness.	2	2	3	2
Possess professional, ethical, social responsibilities, communicational skills and team work needed for a successful professional career.	1	2	1	2

2 PROGRAM CURRICULUM AND TEACHING - LEARNING PROCESSES (120)   Total Marks 105.00

2.1 Program Curriculum (20)   Total Marks 19.00

2.1.1 State the process used to identify extent of compliance of the University curriculum for attaining the Program Outcomes and Program Specific Outcomes as mentioned in Annexurel. Also mention the identified curricular gaps, if any (10)   Institute Marks : 10.00

- R. R. Institute of Technology being a tier-II premier institute is affiliated to Visvesvaraya Technological University (VTU) was started in the year 2008 and offers various Programs, Computer Science and Engineering is one of them and started in the year 2008 with the intake of 60 students. We are following the curriculum of VTU. The program curriculum is as provided by VTU which is a alignment of Basic science, humanities, professional, management courses and their distribution as core and electives with the specified scope of learning.

Gap identification process:
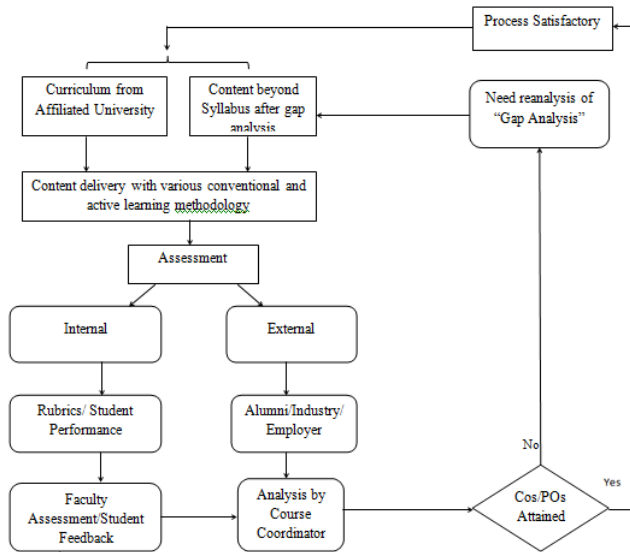
Figure 2.1.1(a) : Process Used to Identify the Compliance of Curriculum

The head of the department will allocate the courses to all the course instructors. The respective course instructor should formulate the course outcomes for each course. The course instructor should identify the program outcomes (PO's) and program specific outcomes (PSO's) then map course outcomes (CO's) with program outcomes (PO's) and program specific outcomes (PSO's). Identify the compliance of CO's with PO's and PSO's. The head of the department will verify the mappings, any corrections should be upated by course instructors. For the finalized mapping, the couse instructors will Indicate the curricular gap. Identify relevant content beyond syllabi for the attainment of program outcomes (PO's) and program specific outcomes (PSO')

List of Program Outcomes

PO1	**Engineering Knowledge:** Apply knowledge of mathematics and science, with fundamentals of Computer Science & Engineering to be able to solve complex engineering problems related to CSE.
PO2	**Problem Analysis:** Identify, Formulate, review research literature and analyse complex engineering problems related to CSE and reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences.

PO3	**Design/Development of Solutions:** Design solutions for complex engineering problems related to CSE and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety and the cultural societal and environmental considerations.
PO4	**Conduct Investigations of Complex Problems**: Use research–based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
PO5	**Modern Tool Usage:** Create, Select and apply appropriate techniques, resources and modern engineering and IT tools including prediction and modelling to computer science related complex engineering activities with an understanding of the limitations.
PO6	**The Engineer and Society:** Apply Reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the CSE professional engineering practice.
PO7	**Environment and Sustainability:** Understand the impact of the CSE professional engineering solutions in societal and environmental contexts and demonstrate the knowledge of, and need for sustainable development.
PO8	**Ethics:** Apply Ethical Principles and commit to professional ethics and responsibilities and norms of the engineering practice.
PO9	**Individual and Team Work:** Function effectively as an individual and as a member or leader in diverse teams and in multidisciplinary Settings.
PO10	**Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large such as able to comprehend and with write effective reports and design documentation, make effective presentations and give and receive clear instructions.
PO11	**Project Management and Finance:** Demonstrate knowledge and understanding of the engineering management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multi-disciplinary environments.
PO12	**Life-Long Learning:** Recognize the need for and have the preparation and ability to engage in independent and life-long learning the broadest context of technological change.

- **Program Specific Outcomes (PSO's)**

PSO 1:	Apply the software practice, principals to design and analysis of complex computer based system
PSO 2:	Design implements and validate system and application software to the various societal needs

PROGRAM CURRICULUM

Basic Sciences and Humanities

The stream includes courses like Engineering Mathematics, Engineering Physics, and Engineering Chemistry, Constitution of India & professional ethics and Environmental studies. These courses form the fundamental basis for all engineering disciplines which provides basic knowledge on mathematics, physics, chemistry, Indian constitution, professional ethics and importance of environment.

Basic Engineering Courses

The stream include courses like Basic electronics, Basic electrical engineering, Programming in C, Computer aided engineering drawing, Elements of mechanical engineering and Elements of civil engineering. These courses provide the fundamental knowledge on all engineering disciplines.

Professional Core Courses

The stream include courses like data structures with c, object oriented programming with C++, design and analysis of algorithms, Unix and shell programming, computer organization, software engineering, system software, operating systems, database management systems, computer networks, file structures, software testing, object oriented modelling and design, programming the web etc. Project work and technical seminar are included in final year to provide opportunity for students to develop understanding of the inter relationship between courses, develop and demonstrate higher order skills, and to apply the gained knowledge.

Management Courses

The stream includes courses like Management and Entrepreneurship. These are essential to create awareness on managerial & entrepreneurial skills, finance management, project management and quality control techniques.

Elective Courses

The stream includes courses like Java and J2EE, storage area networks, information and network security, adhoc networks etc. The Electives provide an avenue for specialization in an area of the student's choice.

The composition of VTU curriculum for the program B.E (Bachelor of Engineering) in Computer Science & Engineering (CSE) is shown in Table 2.1.1 (i) and Figure 2.1.1b shows the graph of streams and university curriculum content in Percentage.

Table 2.1.1 (i): Various Streams of program curriculum

Sl. No.	Streams	VTU Curriculum Content (Number of Subjects)	Total Marks	PO's	PSO's
1	Basic Sciences & Humanities	12	1100	1,2,6,7,8	-
2	Basic Engineering Courses	7	650	1,2,3,5	1,2
3	Professional Core Courses	34	3400	1,2,3,4,5,6,11,12	1,2

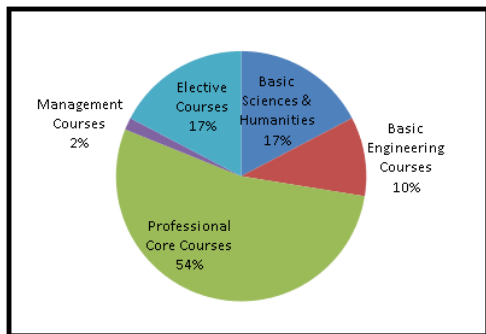| 4 | Management Courses | 1 | 100 | 1,6,7,8,9,10,11, 12 | - |
| 5 | Elective Courses | 11 | 1100 | 1,2,3,4,5,7 | 1,2 |
| | Total | 65 | 6350 | 1, 2, 3, 4, 5, 6, 7, 8,9, 10, 11, 12 | 1,2 |

Figure 2.1.1 (b): Streams and University Curriculum Content in Percentage

The Table 2.1.1 (ii) shows matrix prepared by the department of computer Science and Engineering, which gives the mapping of the courses to program outcomes and program specific outcomes.

The Table 2.1.1. (ii) Matrix mapping of the courses to program outcomes and program specific outcomes

Sl. No.	COURSES	Subject Code	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	P10	PO11	PO12	PSO1	PSO2
								1st Year								
1	Engineering Maths -I	15MAT11/21	√	√	√	√	√					√		√		
2	Engineering Physics	15PHY12/22	√	√	√						√			√		
3	Elements of Civil Engineering	15CIV13/23	√	√	√											
4	Elements of Mechanical Engg.	15EME14/24	√	√	√		√	√	√			√		√		
5	Basic Electrical Engg.	15ELE15/25	√	√	√	√						√	√	√		
6	Workshop Practice	15WSL16/26	√	√	√											
7	Engineering	15PHYL17/27	√	√	√											
8	Constitution of India, Professional Ethics and	15CPH18/28	√					√	√	√						
9	Engineering Maths-I	15MAT11/21	√	√	√	√	√				√	√		√		
10	Engineering Chemistry	15CHE12/22	√	√					√					√		
11	Programming in C & Data Structures	15PCD13/23	√	√	√	√	√				√	√		√		
12	Computer Aided Engineering Drawing	15CED14/24	√		√	√	√					√		√		
13	Basic Electronics	15ELN15/25	√	√	√											
14	Computer Programming Lab	15CPL16/26	√	√	√	√	√				√	√		√		
15	Engineering Chemistry Lab	15CHEL17/27	√	√	√	√	√								√	√
16	Environmental Studies	15CIV18/28	√					√	√	√	√			√	√	
17	Language (Eng.)											√		√	√	
								2nd Year								
18	Engineering Mathematics - III	15MAT31	√	√	√	√										
19	Analog and Digital Electronics	15CS32	√	√	√										√	
20	Data Structures and Applications	15CS33	√	√	√										√	
21	Computer Organization	15CS34	√	√	√	√								√	√	
22	Unix and Shell Programming	15CS35	√	√											√	
23	Discrete Mathematical Structures	15CS36	√	√	√										√	

No	Course	Code	1	2	3	4	5	6	7	8	9	10	11	12	13	14
24	Analog and Digital Electronics Laboratory	15CSL37	√	√											√	√
25	Data Structures Laboratory	15CSL38	√	√	√										√	√
26	Engineering Mathematics - IV	15MAT41	√	√	√	√									√	√
27	Software Engineering	15CS 42	√	√	√	√	√	√	√	√					√	
28	Design and Analysis of Algorithms	15CS43	√	√	√	√								√	√	
29	Microprocessors and Microcontrollers	15CS44	√	√	√	√									√	
30	Object Oriented Concepts	15CS45	√	√	√		√				√			√	√	
31	Data Communication	15CS46	√	√	√										√	
32	Design and Analysis of Algorithm	15CSL47	√	√	√	√								√	√	√
33	Microprocessors Laboratory	15CSL48	√	√	√	√									√	√
3rd Year																
34	Management and Entrepreneurship for IT Industry	15CS51		√	√				√	√	√	√	√		√	√
35	Computer Networks	15CS52	√	√	√										√	
36	Database Management System	15CS53	√	√	√		√								√	√
37	Automata theory and Computability	15CS54	√	√	√										√	√
38	Object Oriented Modeling and Design	15CS551	√	√	√										√	√
39	Cloud Computing	15CS565	√	√	√										√	
40	Computer Network Laboratory	15CSL57	√	√	√										√	√
41	DBMS Laboratory with mini project	15CSL58	√	√	√										√	√
42	Cryptography, Network Security and Cyber Law	15CS61	√	√	√			√		√					√	√
43	Computer Graphics and Visualization	15CS62	√	√	√										√	
44	System Software and Compiler Design	15CS63	√	√	√										√	
45	Operating Systems	15CS64	√	√	√	√									√	√
46	Data Mining and Data Warehousing	15CS651	√	√	√										√	√
47	Operations research	15CS653	√	√	√										√	√
48	Python Application Programming	15CS664	√	√	√	√									√	√
49	System Software and Operating System	15CSL67	√	√	√					√					√	√
50	Computer Graphics Laboratory with mini project	15CSL68	√	√	√										√	√
4th Year																
51	Web Technology and its applications	15CS71		√			√				√					√
52	Advanced Computer Architectures	15CS72	√	√	√										√	
53	Machine Learning	15CS73	√	√	√	√	√								√	√
54	Information and Network Security	15CS743	√	√	√										√	√
55	Storage Area Networks	15CS754		√	√										√	
56	Machine Learning Laboratory	15CSL76	√	√	√	√	√								√	√
57	Web Technology Laboratory with mini project	15CSL77	√	√	√	√	√								√	√
58	Project PhaseI	15CSP78	√	√	√	√	√	√	√	√	√	√	√		√	√
59	Internet of Things and Applications	15CS81	√	√	√	√	√								√	√
60	Big Data Analytics	15CS82		√	√		√								√	√

Sl No	Course Name	Code	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
61	Modern Interface Design	15CS832		√	√										√	√
62	System Modeling and Simulation	15CS834	√	√	√										√	√
63	Internship/Professional Practice	15CS84	√	√	√	√	√	√	√	√	√	√	√	√	√	√
64	Project work phase II	15CSP85	√	√	√	√	√	√	√	√	√	√	√	√	√	√
65	Seminar	15CSS86	√	√		√	√			√	√	√		√	√	√

Observation:

- Table 2.1.1b presents the average course outcomes mapped with program outcomes using direct survey method. In this table we can observe that PO1, PO2, PO3, have 50 to 60 courses mapping and remaining PO's have less than 40 courses mapping. The PO7, PO8, PO9, PO11 were mapped with only few courses. Even in the program specific outcomes also we can observe the gap's. Therefore there are gaps in between the VTU curriculum & program outcomes.

Bridging the Curriculum Gaps:

- The Department of Computer Science & Engineering bridges the gap between the syllabus and industrial needs by conducting the following activities.
  - Technical talks by renowned industrialists / academician
  - Workshops
  - Seminars
  - Guest Lecturers
  - Student Development Programs
  - Conferences
  - Industrial Visits
  - Internships
  - Mini Projects
  - Project Exhibitions
  - Orientation Programs

2.1.2 State the delivery details of the content beyond the syllabus for the attainment of POs and PSOs (10)   Institute Marks : 9.00

Sl. No	Year	Gap	Action Taken	Date-Month-Year	Resource Person with designation	Percentage of Participation	Relevance to POs & PSO's
				2019-20			
1	2019-20	Contextual knowledge, Societal and environmental context, communications, lifelong learning	Seminar on "IT Technology and Emerging Trends"	30/08/2019	Mr.AmeethGogi, Business Head, Live wire Company, Bengaluru	100%	PO6, PO7, PO10, PO12, PSO1
2	2019-20	Techniques, Contextual knowledge, lifelong learning	Guest Lecture "Discrete Mathematics and its Application"	16/08/2019	Dr.Anupama H S, Associate Professor, Dept of Machine Learning & Artificial Intelligence, BMSIT, Bengaluru	66%	PO5, PO6, PO12, PSO1
3	2019-20	Techniques, Contextual knowledge, Societal and environmental context, Professional ethics, multidisciplinary teams, management	Workshop on "Career in Cyber Security"	19/09/2019	Mr.Vishal Pradhan, Senior Security Engineer/Team Lead, QOS Technology, Bengaluru	100%	PO5, PO6, PO7, PO8, PO9, PO10 PO11, PSO1, PSO2
4	2019-20	Investigations of Complex problems, Contextual knowledge	XceleratorSkill Augmentation program	20/09/2019	Mr.Dipraj Mukherjee, Manager, Xcelerator, Bengaluru	100%	PO4, PO5, PO6, PSO1
5	2019-20	Techniques, Contextual knowledge, lifelong learning	Guest lecture on "Automata Theory & Computability"	01/10/2019	Dr.Usha B Associate Professor,Dept of Information Science &Engineering, BMSIT, Bengaluru	73%	PO5, PO6, PO12, PSO1

6	2019-20	Techniques, Contextual knowledge, Societal and environmental context, communication, lifelong learning	3 Day course on "3D experience platform in Aircraft &Aerospace Engineering"	24/10/2019 30/10/2019 31/10/2019	Dr.NatarajRamann, Chief Executive Officer, Centre of Excellence Aerospace and Defence, Bengaluru	100%	PO5, PO6, PO7, PO10, PO11, PSO1, PSO2
7	2019-20	Techniques, Contextual knowledge, Societal and environmental context, Professional ethics, multidisciplinary teams, management	Hands on Workshop on "Machine learning using Anaconda Tool"	04/11/2019	Mr.VenkatVishwanathPalli, Programming Analyst, Lead at Qualcomm, Bengaluru	72%	PO5, PO6, PO7, PO8, PO9, PO10, PO11, PSO1, PSO2
8	2019-20	Contextual knowledge, Societal and environmental context, multidisciplinary team, communications, management	SDP on "Advance Computer Architecture"	08/11/2019	Dr.Minal Mohair, Associate Professor,Dept of Computer Science &Engineering, R V College of Engineering, Bengaluru Dr.Sharvani, Associate Professor,Dept of Computer Science& Engineering, R V College of Engineering, Bengaluru	58%	P05, P07, P09, PO10, PO11, PSO1, PSO2
9	2019-20	Contextual knowledge, societal environmental context, Professional ethics, multidisciplinary team	Industrial visit of "ITI limited Bangalore"	8/11/2019	Mrs.Jyothi R, R.R. Institute of Technology, Bengaluru	62%	PO6, PO7, PO8, PO9, PSO1
10	2019-20	Techniques, Contextual knowledge, Societal and environmental context, Professional ethics, multidisciplinary teams, management	Work shop on" Full stack Web Development"	15/11/2019 to 16/11/2019	Mr.AmeethGogi, Business Head, Livewire Company, Bengaluru	70%	PO5, PO6, PO7, PO8, PO9, PO10 PO11, PSO1, PSO2
11	2019-20	Societal and environmental context, professional ethics, communications, lifelong learning	Technical seminar on "Introduction to Python and Machine Learning"	19/02/2020	Mr.Sudarshan, Manager, Chira Information Technology, Bengaluru	68%	PO7, PO8, PO10,PO12, PSO1
12	2019-20	Techniques, Contextual knowledge, Societal and environmental context, Professional ethics, multidisciplinary teams, management	Workshop on "Block Chain Technology"	26/02/2020	Ramesh Gopal, Block Chain Training Head, Nvest labs, Bengaluru Sharath Krishna, CEO, Nvest labs, Bengaluru	68%	PO5, PO6, PO7, PO8, PO9, PO10 PO11, PSO1, PSO2
13	2019-20	Contextual knowledge, Societal and environmental context, Professional ethics, multidisciplinary team	Visit to IISC Bangalore	29/02/2020	Mr.Dhananjaya M K R.R Institute of Technology, Bengaluru	72%	PO6, PO7, PO8, PO9, PSO1
14	2019-20	Societal and environmental context, professional ethics, communications, lifelong learning	Technical Seminar on "Java Programming"	07/03/2020	Mrs.SripriyaMathan, Founder & Chief Instructor, ShristiTechnology, Bengaluru	75%	PO7, PO8, PO10, PO12, PSO1

15	20019-20	Techniques, societal and environmental context, multidisciplinary teams, communications, management	SDP on "The Flutter Development Bootcamp"	27/05/2020 28/05/2020	Mr.Amith K S, Managing Director, Manyathy Business Solutions, Bengaluru	100%	P05, P07, P09, PO10, PO11, PSO1, PSO2
16	2019-20	Techniques, societal and environmental context, multidisciplinary teams, communications, management	SDP on "Internet of Things with hands on session"	18/06/2020	Mr.SapthaGireesh D M, Tech Lead, Acronton Technologies, Bengaluru	83%	P05, P07, P09, PO10, PO11, PSO1, PSO2
17	2019-20	Societal and environmental context, professional ethics, communications, lifelong learning	Technical seminar on "Java Programming"	19/06/2020	Dr. Ajay Prakash B V, Associate Professor, SJB Institute of Technology, Bengaluru	67%	PO7, PO8, PO10, PO12, PSO1
18	2019-20	Techniques, Contextual knowledge, lifelong learning	Guest Lecture on "Shortest path Algorithms in Design and Analysis of Algorithms"	29/06/2020	Dr.KavithaHalappa, Professor, Siddaganga Institute of Technology, Tumkur	67%	PO5, PO6, PO12, PSO1
19	2019-20	Techniques, Contextual knowledge, Societal and environmental context, Professional ethics, multidisciplinary teams, management	Workshop on "Personality Development and Resume Building"	30/06/2020	Mr.Mohammed,Habbeb, Technology Director, ParvamConsulTechPvt ltd, Bengaluru	100%	PO5, PO6, PO7, PO8, PO9, PO10 PO11, PSO1, PSO2
20	2019-20	Investigation of complex problems, Technics, Contextual knowledge, Societal and environmental context, Professional Ethics, multidisciplinary teams, communications, management, lifelong learning	Certification program on "Natural Language Processing with Python"	01/07/2020 to 11/07/2020	Mr.ThiyaguChandran, Data Analyst, Accenture, Chennai, Tamilnadu	100%	PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO2
21	2019-20	Techniques, societal and environmental context, multidisciplinary teams, communications, management	2 Days SDP on "Ethics and Integrity"	16/07/2020 to 17/07/2020	Mr.Dhananjaya M K, R.R Institute of Technology, Bengaluru. Mrs.Swetha K B, R.R Institute of Technology, Bengaluru	83%	P05, P07, P09, PO10, PO11, PSO1, PSO2
22	2019-20	Techniques, Contextual knowledge, Societal and environmental context, Professional ethics, multidisciplinary teams, management	2 Days Workshop on "Data Masking andInformaticaTools"	18/07/2020 to 19/07/2020	Mrs.Bhagya R, Technical Lead, EVERY India Pvt ltd, Bengaluru	100%	PO5, PO6, PO7, PO8, PO9, PO10 PO11, PSO1, PSO2
23	2019-20	Communication, Professional, Lifelong learning	Seminar on "Technical Paper Writing"	27/07/2020	Dr. Naveen M, R.R. Institute of Technology, Bengaluru.	67%	PO9, PO10, PO11, PO12 PSO1
24	2019-20	Societal and environmental context, professional ethics, communications, lifelong learning	Technical Seminar on "Wireless Communication and Networking"	24/07/2020	Mr. Harish N, CTO, KarunaduTechnologies Pvt Ltd, Bengaluru	100%	PO7, PO8, PO10, PO12, PSO1

25	2019-20	Societal and environmental context, professional ethics, communications, lifelong learning	Technical Seminar on "Telecom Network Synchronization"	25/07/2020	Ms.Shwetha S S, Software Engineer, Avaya, Bengaluru	100%	PO7, PO8, PO10, PO12, PSO1
26	2019-20	Techniques, Contextual knowledge, Societal and environmental context, Professional ethics, multidisciplinary teams, management	Workshop on "Automata Simulation"	27/07/2020	Prof. T P Deepa, Assistant Professor, Jain University, Bengaluru	88%	PO5, PO6, PO7, PO8, PO9, PO10 PO11, PSO1, PSO2
				2018-19			
27	2018-19	Engineer and Society, Environment, Ethics, Individual and Team work, Management	Seminar on "Exposure to Entrepreneurship Activity"	23/08/2018	Mr.Amarendra Kumar, Founder & CEO, Telenoc Solutions, Bengaluru	100	PO6, PO7, PO8. PO9, PO11 PSO1
28	2018-19	Techniques, Engineer and Society, Learning	Visit to BSX Bengaluru Expo 2018, BIEC	07/09/2018 08/09/2018	Ms.Shruthi S, R.R Institute of Technology, Bengaluru	100%	PO5, PO6, PO7 PSO1
29	2018-19	Techniques, Contextual knowledge, Societal and environmentalcontext, multidisciplinary teams, communications, lifelong learning	One Day Workshop Program on "BIG DATA AND HADOOP"	03/10/2018	Mr.NileshLumar Gupta, Head Of Operations, EduNextgen, Bengaluru	72%	PO5, PO6, PO7, PO8, PO9, PO10 PO11, PSO1, PSO2
30	2018-19	Contextual knowledge, Societal and environmental context, communications, lifelong learning	Seminar on "Technology trends in IT industry"	20/11/2018	Dr.Manjunath T, Professor & Head, BMSIT, Bengaluru	92%	PO6, PO7, PO10, PO12, PSO1
31	2018-19	Techniques, Contextual knowledge, Societal and environmental context, multidisciplinary teams, communications, lifelong learning	One Day Workshop on "Machine Learning"	30/11/2018	Prof. GirishBabu C N,& Prof Vinutha K, AsstProfessor, Deptof ISE, BMSIT, Bengaluru	43%	PO5, PO6, PO7, PO8, PO9, PO10 PO11, PSO1, PSO2
32	2018-19	Engineer and Society, Environment, Ethics, Management	Workshop on "Innovation and Manufacturing Startups"	15/02/2019	Dr. T V Prabhakar, Principle Research Scientist, MSME Centre of Excellency, Bengaluru	100	PO6, PO7, PO8, PO11
33	2018-19	Contextual knowledge, Societal and environmental context, communications, lifelong learning	Seminar on "Introduction Data Science"	16/02/2019	Mr.PrithviRaj, G E Digital Bengaluru	100%	PO6, PO7, PO10, PO12, PSO1
34	2018-19	Contextual knowledge, Societal and environmental context, communications, lifelong learning	Seminar on "Hadoop Eco System"	02/03/2019	Mr.RamuK, Module Lead, Mind Tree, Bengaluru Mr.Vasanth, Application Developer, Accenture, Bengaluru	100%	PO6, PO7, PO10, PO12, PSO1

35	2018-19	Contextual knowledge, Societal and environmental context, Professional ethics, communications	Visit to IISC for open day	23/03/2019	Ms.Vinutha, R.R. Institute of Technology, Bengaluru	100%	PO6, PO7, PO8, PO10, PSO3
36	2018-19	Contextual knowledge, Societal and environmental context, communications, lifelong learning	Seminar on "An Introduction to Java Script &Python"	03/04/2019	Mr.Theodore Manning Louis, Bengaluru	100%	PO6, PO7 PO10, PO12, PSO1
37	2018-19	Contextual knowledge, Societal and environmental context, communications, lifelong learning	Technical Talk on "Computer Networks & Network Security"	04/04/2019	Mrs.Sunitha, Manager, Jetking, Bengaluru	100%	PO6, PO7, PO10, PO12, PSO1
38	2018-19	Contextual knowledge, Societal and environmental context, communications, lifelong learning	Technical Talk on "Embedded Systems"	05/04/2019	Mr.Sanjay Kumar, Founder, Jyothi Embedded labs, Bengaluru	77%	PO6, PO7, PO10, PO12, PSO1
39	2018-19	Techniques, Contextual knowledge, lifelong learning	Guest Lecture on "Sorting Techniques"	09/04/2019	Dr.Kavitha H, Associate Professor, Department of Information Science & Engineering, SIT,Tumkuru	58%	PO5, PO6, PO12, PSO1
40	2018-19	Techniques, Contextualknowledge, Societal and environmentalcontext, multidisciplinary teams, communications, lifelong learning	Workshop on "Arm 7 processor & itsApplications"	24/04/2019	Dr.Sreenivasa Settee, SST Technologies, Bengaluru	62%	PO5, PO6, PO7, PO8, PO9, PO10 PO11, PSO1, PSO2
41	2018-19	Techniques, Contextualknowledge, Societal and environmentalcontext, multidisciplinary teams, communications, lifelong learning	Workshop on "Python ApplicationDevelopment using Django& SQLite"	25/04/2019	Mr.Ashoka Kumar K, Technical Head, XON Lab, Bengaluru	80%	PO5, PO6, PO7, PO8, PO9, PO10 PO11, PSO1, PSO2
42	2018-19	Techniques, Contextual knowledge, multidisciplinary teams, communications	Project Exhibition "MERAKI-2019"	3/5/2019	Dr.Manjunath R, Professor, R.R Institute of Technology, Bengaluru	93%	PO5, PO6, PO9, PO10, PSO2
43	2018-19	ProblemInvestigation, Contextual knowledge, multidisciplinary teams, communications, lifelong learning	International conference on "Recent innovations in science, Engineering and management"	10/05/2019 to 11/05/2019	Prof. Levis SIT, Bengaluru, Prof. Komala, JNU, Andhra Pradesh.	67%	PO2, PO6, PO7, PO10, PO12, PSO1, PSO2
				2017-18			
44	2017-18	Techniques, Contextual knowledge, Societal and environmental context, multidisciplinary teams, communications, lifelong learning	Workshop on "JAVA Application Development"	13/04/2017	Mr. Rajesh T, Corporate JAVA Trainer, Start Career, Bengaluru	100%	PO5, PO6, PO7, PO8, PO9, PO10 PO11, PSO1, PSO2
45	2017-18	Techniques, Contextual knowledge, Societal and environmental context, multidisciplinary teams, communications, lifelong learning	Handson workshop on Networking	27/10/2017 to29/10/2017	Mr. H A Abdul Sajid, Jetking, Bengaluru	85%	PO5, PO6, PO7, PO8, PO9, PO10 PO11, PSO1, PSO2

46	2017-18	Contextual knowledge, Societal and environmental context, Professional ethics, communications	Visit to Solar Power Plant Shivanasamudra in Association with KSSIA	25/03/2018	Mrs.Tejaswini&Mr.Nethaji Assistant Engineers, SPP Shivanasamudra	83%	PO6, PO7, PO8, PO10, PSO3
47	2017-18	Contextual knowledge, Societal and environmental context, Professional ethics, communications	Visit to ISM UNIV, Bengaluru	15/04/2018	Dr.Loganathan Head of Ism ISM UNIV, Rajaji Nagar, Bengaluru	83%	PO6, PO7, PO8, PO10, PSO3
48	2017-18	Contextual knowledge, Societal and environmental context, Professional ethics, communications	Visit to "National Level Project Exhibition and Conference"	11/05/2018	Mr.Dhananjaya M K, R.R Institute of Technology, Bengaluru	100%	PO6, PO7, PO8, PO10, PSO3
49	2017-18	Techniques, Contextual knowledge, multidisciplinary teams, communications	Project Exhibition "MERAKI"	15/05/2018	Mr. Patel M S, Associate Professor, CSE Department, RRIT	57%	PO5, PO6, PO9, PO10, PSO2

2019-20

S.No	Gap	Action Taken	Date-Month-Year	Resource Person with Designation	% of students	Relevance to POs, PSOs
1	Contextual knowledge, Societal and environmental context, communications, lifelong learning	Seminar on "IT Technology and Emerging Trends"	30/08/2019	Mr.AmeethGogi, Business Head, Live wire Company, Bengaluru	100	PO6, PO7, PO10, PO12, PSO1
2	Techniques, Contextual knowledge, lifelong learning	Guest Lecture "Discrete Mathematics and its Application"	16/08/2019	Dr.Anupama H S, Associate Professor, Dept of Machine Learning & Artificial Intelligence, BMSIT, Bengaluru	66	PO5, PO6, PO12, PSO1
3	Techniques, Contextual knowledge, Societal and environmental context, Professional ethics, multidisciplinary teams, managemen	Workshop on "Career in Cyber Security"	19/09/2019	Mr.Vishal Pradhan, Senior Security Engineer/Team Lead, QOS Technology, Bengaluru	100	PO5, PO6, PO7, PO8, PO9, PO10 PO11, PSO1, PSO2
4	Investigations of Complex problems, Contextual knowledge	XceleratorSkill Augmentation program	20/09/2019	Mr.Dipraj Mukherjee, Manager, Xcelerator, Bengaluru	100	PO4, PO5, PO6, PSO1
5	Techniques, Contextual knowledge, lifelong learning	Guest lecture on "Automata Theory & Computability"	01/10/2019	Dr.Usha B Associate Professor,Dept of Information Science &Engineering, BMSIT, Bengaluru	73	PO5, PO6, PO12, PSO1
6	Techniques, Contextual knowledge, Societal and environmental context, communication, lifelong learning	3 Day course on "3D experience platform in Aircraft &Aerospace Engineering"	24/10/2019	Dr.NatarajRamann, Chief Executive Officer, Centre of Excellence Aerospace and Defence, Bengaluru	100	PO5, PO6, PO7, PO10, PO11, PSO1, PSO2
7	Techniques, Contextual knowledge, Societal and environmental context, Professional ethics, multidisciplinary teams, management	Hands on Workshop on "Machine learning using Anaconda Tool"	04/11/2019	Mr.VenkatVishwanathPalli, Programming Analyst, Lead at Qualcomm, Bengaluru	72	PO5, PO6, PO7, PO8, PO9, PO10, PO11, PSO1, PSO2
8	Contextual knowledge, Societal and environmental context, multidisciplinary team, communications, management	SDP on "Advance Computer Architecture"	08/11/2019	Dr.Minal Mohair, Associate Professor,Dept of Computer Science &Engineering, R V College of Engineering, Bengaluru Dr.Sharvani, Associate Professor,Dept of Computer Science& Engineering, R V College of Engineering, Bengaluru	58	P05, P07, P09, PO10, PO11, PSO1, PSO2
9	Contextual knowledge, societal environmental context, Professional ethics, multidisciplinary team	Industrial visit of "ITI limited Bangalore"	8/11/2019	Mrs.Jyothi R, R.R. Institute of Technology, Bengaluru	62	PO6, PO7, PO8, PO9, PSO1
10	Techniques, Contextual knowledge, Societal and environmental context, Professional ethics, multidisciplinary teams, management	Work shop on" Full stack Web Development"	15/11/2019	Mr.AmeethGogi, Business Head, Livewire Company, Bengaluru	70	PO5, PO6, PO7, PO8, PO9, PO10 PO11, PSO1, PSO2

11	Societal and environmental context, professional ethics, communications, lifelong learning	Technical seminar on "Introduction to Python and Machine Learning"	19/02/2020	Mr.Sudarshan, Manager, Chira Information Technology, Bengaluru	68	PO7, PO8, PO10,PO12, PSO1
12	Techniques, Contextual knowledge, Societal and environmental context, Professional ethics, multidisciplinary teams, management	Workshop on "Block Chain Technology"	26/02/2020	Ramesh Gopal, Block Chain Training Head, Nvest labs, Bengaluru Sharath Krishna, CEO, Nvest labs, Bengaluru	68	PO5, PO6, PO7, PO8, PO9, PO10 PO11, PSO1, PSO2
13	Contextual knowledge, Societal and environmental context, Professional ethics, multidisciplinary team	Visit to IISC Bangalore	29/02/2020	Mr.Dhananjaya M K R.R Institute of Technology, Bengaluru	72	PO6, PO7, PO8, PO9, PSO1
14	Societal and environmental context, professional ethics, communications, lifelong learning	Technical Seminar on "Java Programming"	07/03/2020	Mrs.SripriyaMathan, Founder & Chief Instructor, ShristiTechnology, Bengaluru	75	PO7, PO8, PO10, PO12, PSO1
15	Techniques, societal and environmental context, multidisciplinary teams, communications, management	SDP on "The Flutter Development Bootcamp"	27/05/2020	Mr.Amith K S, Managing Director, Manyathy Business Solutions, Bengaluru	100	P05, P07, P09, PO10, PO11, PSO1, PSO2
16	Techniques, societal and environmental context, multidisciplinary teams, communications, management	SDP on "Internet of Things with hands on session"	18/06/2020	Mr.SapthaGireesh D M, Tech Lead, Acronton Technologies, Bengaluru	83	P05, P07, P09, PO10, PO11, PSO1, PSO2
17	Societal and environmental context, professional ethics, communications, lifelong learning	Technical seminar on "Java Programming"	19/06/2020	Dr. Ajay Prakash B V, Associate Professor, SJB Institute of Technology, Bengaluru	67	PO7, PO8, PO10, PO12, PSO1
18	Techniques, Contextual knowledge, lifelong learning	Guest Lecture on "Shortest path Algorithms in Design and Analysis of Algorithms"	29/06/2020	Dr.KavithaHalappa, Professor, Siddaganga Institute of Technology, Tumkur	67	PO5, PO6, PO12, PSO1
19	Techniques, Contextual knowledge, Societal and environmental context, Professional ethics, multidisciplinary teams, management	Workshop on "Personality Development and Resume Building"	30/06/2020	Mr.Mohammed,Habbeb, Technology Director, ParvamConsulTechPvt ltd, Bengaluru	100	PO5, PO6, PO7, PO8, PO9, PO10 PO11, PSO1, PSO2
20	Investigation of complex problems, Technics, Contextual knowledge, Societal and environmental context, Professional Ethics, multidisciplinary teams, communications, management, lifelong learning	Certification program on "Natural Language Processing with Python"	01/07/2020	Mr.ThiyaguChandran, Data Analyst, Accenture, Chennai, Tamilnadu	100	PO4, PO5, PO6, PO7, PO8, PO9, PO10, PO11, PO12, PSO2
21	Techniques, societal and environmental context, multidisciplinary teams, communications, management	2 Days SDP on "Ethics and Integrity"	16/07/2020	Mr.Dhananjaya M K, R.R Institute of Technology, Bengaluru. Mrs.Swetha K B, R.R Institute of Technology, Bengaluru	83	P05, P07, P09, PO10, PO11, PSO1, PSO2
22	Techniques, Contextual knowledge, Societal and environmental context, Professional ethics, multidisciplinary teams, management	2 Days Workshop on "Data Masking andInformaticaTools"	18/07/2020	Mrs.Bhagya R, Technical Lead, EVERY India Pvt ltd, Bengaluru	100	PO5, PO6, PO7, PO8, PO9, PO10 PO11, PSO1, PSO2
23	Communication, Professional, Lifelong learning	Seminar on "Technical Paper Writing"	27/07/2020	Dr. Naveen M, R.R. Institute of Technology, Bengaluru.	67	PO9, PO10, PO11, PO12 PSO1
24	Societal and environmental context, professional ethics, communications, lifelong learning	Technical Seminar on "Wireless Communication and Networking"	24/07/2020	Mr. Harish N, CTO, KarunaduTechnologies Pvt Ltd, Bengaluru	100	PO7, PO8, PO10, PO12, PSO1
25	Societal and environmental context, professional ethics, communications, lifelong learning	Technical Seminar on "Telecom Network Synchronization"	25/07/2020	Ms.Shwetha S S, Software Engineer, Avaya, Bengaluru	100	PO7, PO8, PO10, PO12, PSO1
26	Techniques, Contextual knowledge, Societal and environmental context, Professional ethics, multidisciplinary teams, management	Workshop on "Automata Simulation"	27/07/2020	Prof. T P Deepa, Assistant Professor, Jain University, Bengaluru	88	PO5, PO6, PO7, PO8, PO9, PO10 PO11, PSO1, PSO2

2018-19

S.No	Gap	Action Taken	Date-Month-Year	Resource Person with Designation	% of students	Relevance to POs, PSOs
1	Engineer and Society, Environment, Ethics, Individual and Team work, Management	Seminar on "Exposure to Entrepreneurship Activity"	23/08/2018	Mr.Amarendra Kumar, Founder & CEO, Telenoc Solutions, Bengaluru	100	PO6, PO7, PO8. PO9, PO11 PSO1
2	Techniques, Engineer and Society, Learning	Visit to BSX Bengaluru Expo 2018, BIEC	07/09/2018	Ms.Shruthi S, R.R Institute of Technology, Bengaluru	100	PO5, PO6, PO7 PSO1
3	Techniques, Contextual knowledge, Societal and environmentalcontext, multidisciplinary teams, communications, lifelong learning	One Day Workshop Program on "BIG DATA AND HADOOP"	03/10/2018	Mr.NileshLumar Gupta, Head Of Operations, EduNextgen, Bengaluru	72	PO5, PO6, PO7, PO8, PO9, PO10 PO11, PSO1, PSO2
4	Contextual knowledge, Societal and environmental context, communications, lifelong learning	Seminar on "Technology trends in IT industry"	20/11/2018	Dr.Manjunath T, Professor & Head, BMSIT, Bengaluru	92	PO6, PO7, PO10, PO12, PSO1
5	Techniques, Contextual knowledge, Societal and environmental context, multidisciplinary teams, communications, lifelong learning	One Day Workshop on "Machine Learning"	30/11/2018	Prof. GirishBabu C N,& Prof Vinutha K, AsstProfessor, Deptof ISE, BMSIT, Bengaluru	43	PO6, PO7, PO8, PO11
6	Engineer and Society, Environment, Ethics, Management	Workshop on "Innovation and Manufacturing Startups"	15/02/2019	Dr. T V Prabhakar, Principle Research Scientist, MSME Centre of Excellency, Bengaluru	100	PO6, PO7, PO8, PO11
7	Contextual knowledge, Societal and environmental context, communications, lifelong learning	Seminar on "Introduction Data Science"	16/02/2019	Mr.PrithviRaj, G E Digital Bengaluru	100	PO6, PO7, PO10, PO12, PSO1
8	Contextual knowledge, Societal and environmental context, communications, lifelong learning	Seminar on "Hadoop Eco System"	02/03/2019	Mr.RamuK, Module Lead, Mind Tree, Bengaluru Mr.Vasanth, Application Developer, Accenture, Bengaluru	100	PO6, PO7, PO10, PO12, PSO1
9	Contextual knowledge, Societal and environmental context, Professional ethics, communications	Visit to IISC for open day	23/03/2019	Ms.Vinutha, R.R. Institute of Technology, Bengaluru	100	PO6, PO7, PO8, PO10, PSO3
10	Contextual knowledge, Societal and environmental context, communications, lifelong learning	Seminar on "An Introduction to Java Script &Python"	03/04/2019	Mr.Theodore Manning Louis, Bengaluru	100	PO6, PO7, PO10, PO12, PSO1
11	Contextual knowledge, Societal and environmental context, communications, lifelong learning	Technical Talk on "Computer Networks & Network Security"	04/04/2019	Mrs.Sunitha, Manager, Jetking, Bengaluru	100	PO6, PO7, PO10, PO12, PSO1
12	Contextual knowledge, Societal and environmental context, communications, lifelong learning	Technical Talk on "Embedded Systems"	05/04/2019	Mr.Sanjay Kumar, Founder, Jyothi Embedded labs, Bengaluru	77	PO6, PO7, PO10, PO12, PSO1
13	Techniques, Contextual knowledge, lifelong learning	Guest Lecture on "Sorting Techniques"	09/04/2019	Dr.Kavitha H, Associate Professor, Department of Information Science & Engineering, SIT,Tumkuru	58	PO5, PO6, PO12, PSO1
14	Techniques, Contextualknowledge, Societal and environmentalcontext, multidisciplinary teams, communications, lifelong learning	Workshop on "Arm 7 processor & itsApplications"	24/04/2019	Dr.Sreenivasa Settee, SST Technologies, Bengaluru	62	PO5, PO6, PO7, PO8, PO9, PO10 PO11, PSO1, PSO2
15	Techniques, Contextualknowledge, Societal and environmentalcontext, multidisciplinary teams, communications, lifelong learning	Workshop on "Python ApplicationDevelopment using Django& SQLite"	25/04/2019	Mr.Ashoka Kumar K, Technical Head, XON Lab, Bengaluru	80	PO5, PO6, PO7, PO8, PO9, PO10 PO11, PSO1, PSO2
16	Techniques, Contextual knowledge, multidisciplinary teams, communications	Project Exhibition "MERAKI-2019"	3/5/2019	Dr.Manjunath R, Professor, R.R Institute of Technology, Bengaluru	93	PO5, PO6, PO9, PO10, PSO2
17	ProblemInvestigation, Contextual knowledge, multidisciplinary teams, communications, lifelong learning	International conference on "Recent innovations in science, Engineering and management"	10/05/2019	Prof. Levis SIT, Bengaluru, Prof. Komala, JNU, Andhra Pradesh.	67	PO2, PO6, PO7, PO10, PO12, PSO1, PSO2

2017-18

S.No	Gap	Action Taken	Date-Month-Year	Resource Person with Designation	% of students	Relevance to POs, PSOs
1	Techniques, Contextual knowledge, Societal and environmental context, multidisciplinary teams, communications, lifelong learning	Workshop on "JAVA Application Development"	13/04/2017	Mr. Rajesh T, Corporate JAVA Trainer, Start Career, Bengaluru	100	PO5, PO6, PO7, PO8, PO9, PO10 PO11, PSO1, PSO2
2	Techniques, Contextual knowledge, Societal and environmental context, multidisciplinary teams, communications, lifelong learning	Handson workshop on Networking	27/10/2017	Mr. H A Abdul Sajid, Jetking, Bengaluru	85	PO5, PO6, PO7, PO8, PO9, PO10 PO11, PSO1, PSO2
3	Contextual knowledge, Societal and environmental context, Professional ethics, communications	Visit to Solar Power Plant Shivanasamudra in Association with KSSIA	25/03/2018	Mrs.Tejaswini&Mr.Nethaji Assistant Engineers, SPP Shivanasamudra	83	PO6, PO7, PO8, PO10, PSO3
4	Contextual knowledge, Societal and environmental context, Professional ethics, communications	Visit to ISM UNIV, Bengaluru	15/04/2018	Dr.Loganathan Head of Ism ISM UNIV, Rajaji Nagar, Bengaluru	83	PO6, PO7, PO8, PO10, PSO3
5	Contextual knowledge, Societal and environmental context, Professional ethics, communications	Visit to "National Level Project Exhibition and Conference"	11/05/2018	Mr.Dhananjaya M K, R.R Institute of Technology, Bengaluru	100	PO6, PO7, PO8, PO10, PSO3
6	Techniques, Contextual knowledge, multidisciplinary teams, communications	Project Exhibition "MERAKI"	15/05/2018	Mr. Patel M S, Associate Professor, CSE Department, RRIT	57	PO5, PO6, PO9, PO10, PSO2

2.2 Teaching - Learning Processes (100)   Total Marks 86.00

2.2.1 Describe processes followed to improve quality of Teaching & Learning (25)   Institute Marks : 20.00
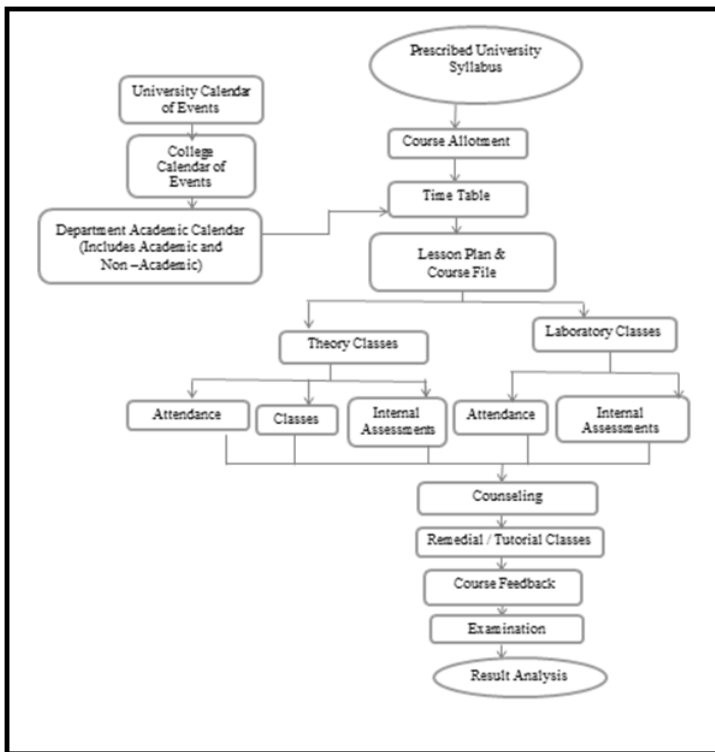

Figure 2.2.1a: Teaching-Learning Process

Keeping in mind the university and college calendar of events, department comes out with its own calendar of events. Course preferences are asked by Head of the Department to all the faculty members and courses are allotted.

The process followed to improve the quality of teaching and learning is described in Figure 2.2.1a. An effective connected model to improve the quality of teaching and learning is being adopted which includes the following process:

A. Adherence to academic calendar (Institute and Department calendar):

Department prepares its own Calendar of events in alignment with University and Institute academic calendar prior to the commencement of the semester. The process for formation and adherence to the academic calendar and Compliance of Department calendar of events shown in Figure 2.2.1b. Lesson plan with course objectives and course outcomes are prepared by the course instructor before the commencement of the semester and is duly approved by the Head of the department. According to the lesson plan, work done has been inculcated in the academic file to ensure coverage of syllabus duly monitored by head of the department. The department later includes the activities like skill development workshops, Seminars, Student Development Programs, Awareness Programs and Industrial/Exhibition visits etc., to prepare the department academic calendar "**Calendar of Events**" (COE). The COE is circulated among the faculty and students, well in advance before the commencement of the semester and strictly adhered.
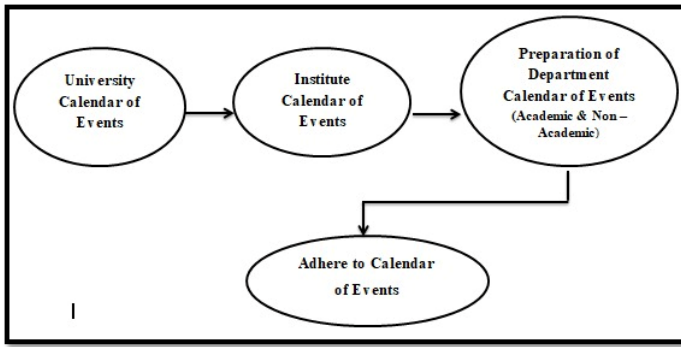
Figure 2.2.1b: Adherence to Academic Calendar

B. Use of various Instructional Methods & Pedagogical Initiatives

Pedagogies play an important role in bringing of content and it varies with the audience. Course allocation is made based on the choice of the faculty members one month before the commencement of semester. Once the courses are allocated, the faculty members prepare a detailed lesson plan, question bank, assignments questions, etc. for a particular course. Course handout and materials are prepared keeping in mind the lesson plan and course outcomes. Faculty members use various pedagogical methods for effective teaching learning process. Fig 2.2.1c illustrates some of the pedagogical initiatives which are followed in the department.
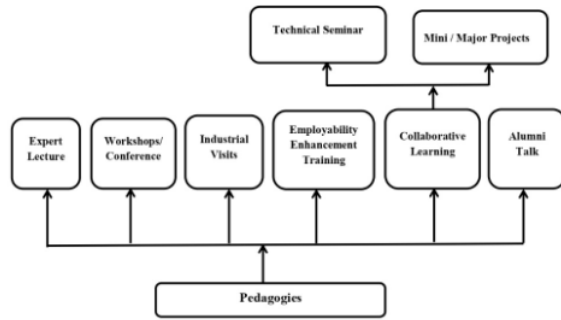

Figure 2.2.1c: Pedagogical Initiatives

- **Expert/Guest Lecturer:** The department organizes various expert/guest lecture to provide in depth knowledge on different technologies. This provides a platform for students to express their ideas and views.
- **Collaborative Learning:** Students share knowledge or discuss topics in small group or in peer mode.
- **Alumni Talk:** Apart from academics, the department conducts an alumni talks for the students to get the opportunity to interact and discuss with their seniors regarding the current industry trends.
- **Project Based Learning (PBL):** PBL is significantly more effective than traditional instruction to train competent and skilled practitioners and it promotes long-term retention of knowledge and skills. It is an innovative practice that is used to implement Outcome Based Education system. Students are encouraged to carry out mini projects to apply their engineering knowledge from fifth semester onwards till eighth semester. Student has to take up mini project based on their interest with the help of faculty. At the end of each semester, projects are evaluated. The table 2.2.1(i) give few Mini Project details and figure 2.2.1d is a sample copy of mini project.

Table 2.2.1 (i): Mini Project Details

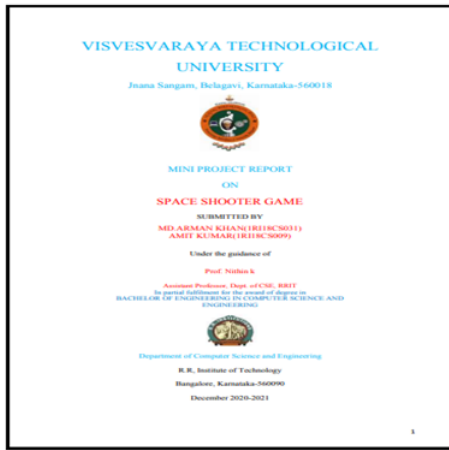| Sl. No	Name of Student	Mini Project Title
1	Parnandi V H Gurunadha Sarma	A boy walking in rain
2	Madhu L	Bouncing ball
3	Rakshitha S V	Simple Village
4	Bibek Modak	Analog Clock
5	Chandan Kumar B N	3D House
6	Rakshitha A	Snake game
7	Priyadarshini H	Helicopter
8	Araman Khan	Space Shooter Game
9	Rakshitha J	Traffic signals
10	Kiran Kumar V C	Maze Game Project

Figure 2.2.1d: Sample copy of Mini Project

- **Internship:** At the end of semester or in vacation time students is allowed to carry out internship in reputed industries/companies to get practical exposure from industries. It helps the students to bridge the gap between the subject's studies and industrial need. The table 2.2.1(ii) gives few student internship details figure 2.2.1e is a sample certificate copy of internship.

Table 2.2.1(ii): Few sample of Internship Details

Sl. No	Title of the Internship	Name of the Partnering Institution/ Industry /Research lab	Duration	Students Name
1	Online shoe marketing	4NGLE Software Consultancy Pvt. Ltd, Bengaluru	10/7/2018 to 6/8/2018	Shwetha M
2	Mini Scientific calculator	LIVEWARE, Bengaluru	09/07/2018 to 04/08/2018	Irfan pasha
3	Programming using Python	LIVEWARE, Bengaluru		Sathish P
4	Minesweeper Game	LIVEWARE, Bengaluru	09/07/2018 to 04/08/2018	Hari Kireeti B K
5	Event Queue	Parvam Consultant Pvt Ltd, Bengaluru	4 Weeks	Nayana H V
6	Basic Elements of android application Development	Seamovation labs Private Limited, Bengaluru	09/07/2018 to 09/08/2018	Vasuki E M
7	Web Development	Infi Data Technologies, Bengaluru	10/07/2018 to 10/08/2018	Raisa Kauser
8	Network Automation	Reliance Jio Info com. Limited, Bengaluru	09/07/2018 to 06/08/2018	Soundarya V R
9	Programming using Python	Livewire, Bengaluru	09/07/2018 to 04/08/2018	Nikhil B K
10	Online Test Management Tool	Bharat Electronics Limited, Bengaluru	09/07/2018 to 07/08/2018	Ashwini Shridhar DE
11	Animated clock and hour Glass loader	Bharat Electronics Limited (BEL), Bengaluru	11/07/2018 to 09/08/2018	Indu B
12	Android	Liverwire, Bengaluru	09/07/2018 to 04/08/2018	Drawpada Sharma
13	Mini Scientific Calculator	Liverwire, Bengaluru	09/07/2018 to 4/8/2018	Vinutha H
14	Python	Liverwire, Bengaluru	09/07/2018 to 04/08/2018	Salim M Gumbo

15	Random password generator	Livewire, Bengaluru	09/07/2018 to 04/08/2018	Gayathri H. D
16	Minesweeper game	Livewire, Bengaluru	09/07/2018 to 04/08/2018	Bindu S
17	Online shoe marketing	4NGLE Software Consultancy Pvt.Ltd, Bengaluru	10/07/2018 to 06/08/2018	Richa Kumari
18	Programming using python	Livewire, Bengaluru	09/07/2018 to 04/08/2018	Shreekanth
19	Kloh event management application	Kloh Internet Pvt Ltd, Bengaluru	01/07/2018 to 31/08/2018	Milan Shrestha
20	Customer Relationship Management	Parvam Consultant Pvt Ltd, Bengaluru	07/01/2019 to 07/02/2019	Julius Diamary
21	Timer	Livewire, Bengaluru	09/07/2018 to 04/08/2018	Srikanth B. R
22	Minesweeper game	Livewire, Bengaluru	09/07/2018 to 04/08/2018	Monika P. V
23	Dine-N-Wine	Infidata Technologies, Bengaluru	10/07/2018 to 10/08/2018	Maheen Sedra
24	Sentiment Analysis Using Nltk	Cybrain Software Solutions Pvt Limited, Bengaluru	8th July 2019 To 8th August 2019	Vishal Gupta
25	Color Detection for Blind People	Nano Robotics Embedded Technologies, Bengaluru	5th July 2019 To 5th August 2019	Yashaswini K
26	Prediction Of Iris Data Set	Karunadu Technologies Private Limited, Bengaluru	8th July 2019 To 8th August 2019	Umesh Kandel
27	Metro Cash and Carry	Technofly Solutions, Bengaluru	8th July 2019 To 8th August 2019	Lavanya R
28	Loan Status Prediction	Karunadu Technologies Private Limited, Bengaluru	8th July 2019 To 8th August 2019	Likitha Y
29	Gateway-Weather Monitoring System	Nano Robotics Embeded Technologies, Bengaluru	6th July 2019 To 6th August 2019	Nithesh Kumar
30	Sentiment Analysis Using Nltk	Cybrain Software Solutions Pvt Limited, Bengaluru	8th July 2019 To 8th August 2019	Tejashwini R
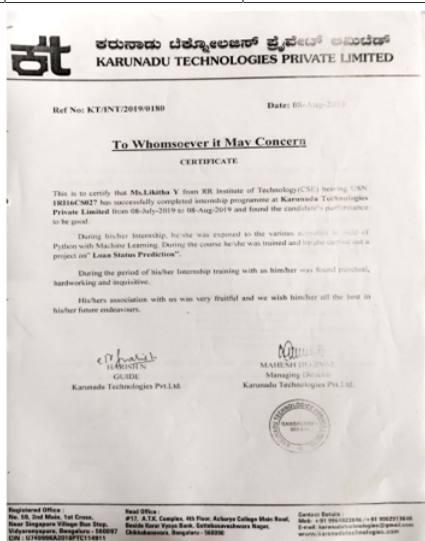
Figure 2.2.1e Sample certificate copy of internship

- **Conference:** The Department organizes conference to enrich the Knowledge of students. This provides a platform for both the faculty and students to share their knowledge and to hold discussion with eminent people from both academia and industry and also with their peers. These events help the students to acquire different skills. National Conference on Computer Science & Technology Allies in Research NCCSTAR – 2020-2021 academic year was conducted during July 16th and 17th, by RR Institute of Technology. Figure 2.2.1f Sample copy of Conference. International Conference on Research Trends in Engineering & Management (IFERP) 2020-2021 academic year was conducted during August 20th and 21st, by RR Institute of Technology. International Conference on Recent Innovations in Science Engineering & Management in (RISEM-2019) 2019-2020 academic year was conducted during May 10th and 11th, by RR Institute of Technology.

- **Workshops:** Department organizes workshops to facilitate the students in having a hands on training in a specific domain. These workshops enable students in learning and realizing new and latest technologies. The students get a platform to exhibit their ideas and implement them in reality. The Table 2.2.1 (iii) gives few sample workshops organized.

Table 2.2.1 (iii): Few Workshops

Sl. No	Name of the Workshop	Resource Person Details	Date of Conduction	No of Participants
1	Handson workshop on Networking	Mr. H A Abdul Sajid, Jetking, Bengaluru	27/10/2017 to 29/10/2017	51
2	Workshop on Bigdata and Hadoop	Mr. Nilesh Kumar Gupta, Head of Operations, EduNextgen, Bengaluru	03/10/2018	48
3	Workshop on Machine Learning	Prof. Girish Babu C N & Prof. Vinutha K Asst. professor Dept. of ISE,BMSIT, Bengaluru	30/11/2018	56
4	ARM 7 processor and its applications	Dr. Sreenivasa Settee, SST Technologies	24/04/2019	37
5	Python Application Development using Django & SQLite.	Mr. Ashok Kumar K ,Technical head, XON Lab, Bangalore	25/04/2019	48
6	Career in Cyber Security	Mr. Vishal Pradhan,Senior Security Engineer /Team Lead QOS Technology, Bengaluru	20/09/2019	87
7	Hands on Machine learning using Anaconda Tool	Mr. Venkat babu viswanathapalli, Programming Analyst Lead at qualcomm Bengaluru	04/11/2019	43
8	Full Stack Web Development	Mr. Ameet Gogi ,Business Head Livewire Company, Bengaluru	15/11/219& 16/11/2019	42
9	Cyber Security & Ethical Hacking	Mr. Manoj Kashyap R,Technical Corporate Trainer, Classfly, Bengaluru	27/04/2020	65

C. Methodologies to support weak students and encourage bright Students

The weak and bright students are identified based on their performance in university exams and internal assessment of the current semester. The below figure 2.2.1g shows the process of identifying the week and bright students. The table 2.2.1(iv) shows the guidelines to identify the weak students and Table 2.2.1(v) shows the guidelines to identify the weak students bright students.
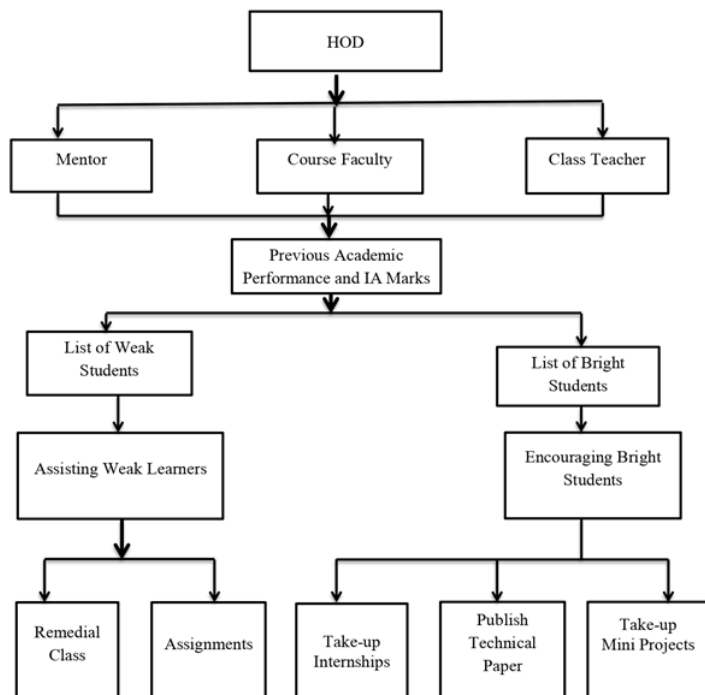
Figure 2.2.1g: Process of identifying and assisting weak and bright students

Table 2.2.1(iv): Guidelines to identify weak students

Identifying and assisting weak students	
Identification Criteria	**Assisting**
• The HOD, Course Faculty, Class teacher and Mentors are involved in finalizing the weak students. • The finalization of weak students will be done based on the previous academic performance and 1st IA marks of the current semester.	• Remedial classes are conducted. • Assignment will be provided to improve their results. • Solving previous years VTU question Papers. • Periodic Counseling will be done by class teacher and mentor.

Table 2.2.1(v):: Guidelines to identify bright students

Identifying and assisting bright students	
Identification Criteria	**Assisting**
• The HOD, course faculty, class teacher and mentors are involved in identifying and finalizing the bright students. • The finalization of bright students will be done based on the overall academic performance and other activities.	• Students are motivated to participate in Workshops, Seminars, Conferences and student development programs. • Encouraged to take up competitive examinations. • Motivated to take up the internships and also to do the mini projects. • Encoraged to do the publications. • Top three students will be awarded with certificates and memento at the institute level. • Top three students are published in news letters

D. Quality of Classroom Teaching

- **Classroom teaching:** The lecture delivery by the faculty is through a set of educational technology/tools such as
  - Chalk and talk - Lecturing is done using green/blackboard.
  - Power point presentation (PPT).
  - Lecturing using LCD Projectors
  - Citing real world examples for application based courses.
  - Case studies
  - Access to study material in e-resources
  - Use of Open Source Software.
  - Demo in Lab.
  - Usage of videos.
  - Assignments.
  - Question bank.
  - Quiz
- **Cooperative teaching learning:** Students share knowledge or discuss topics in small group or in peer mode.

- **Preparation of Lesson Plan:** Well-structured lesson plans are prepared / revised for all theory and practical courses on a period to period basis, scrutinized by HoDs and made available to the Students.

- **Academic Review:** Head of Department regularly visit classes to observe the teaching process and convey their suggestions and appreciations to the faculty member.

- **Assignments based problem solving:** Assignments are given to students on problems and they solved by themselves.

- **Laboratory demonstration:** Demonstration of system or parts of real world system using modern tools.

- **Group discussion/ presentation:** Students learn communcation skills through group discussion.

E. Conduct of Experiments (Observation in Lab)

- Laboratory handling faculty prepares manual for laboratory that includes:
  - Course syllabus
  - Programs with all possible inputs and outputs
  - Viva –Voce Question Bank
  - Laboratory handling faculty explains the process of conduction, scheme and evaluation for experiment and internal test to the students.
  - Laboratory handling faculty explains programs in class and clarifies doubts if any.
  - Laboratory handling faculty executes all the programs with respect to University Curriculum.
  - Students prepare for the program execution and give a write up in the observation book which is evaluated after the conduction of experiment.
  - After the completion of lab session the students should write the program in the record, the same will be checked by the faculty.

F. Continuous Assessment in the laboratory

- Continuous Assessment is divided into two components
  - Evaluation in every lab session
  - Internal Assessment Test
- Program conduction is evaluated, viva is conducted, and marks are allotted.
- Students record the results and submit the record. Records are evaluated, and marks are computed.
- HOD will regularly monitor the continuous assessment of students.
- Final assessment marks are computed based on Lab sessions marks and Lab IA.

Implementation of Improving Quality of Laboratory Experiments

The laboratories are evaluated as per the university norms.

Stage	Evaluation Type	
1.	Continuous Evaluation in every lab session	**10** marks
2.	Internal Test	**30** marks
Total Marks		**40 marks**

The laboratories are evaluted in two different Stages:

Stage 1: Continuous Evaluation in every lab session (10 marks)

> The Continuous Evaluation is done by the faculty in every lab session for 10 marks based on rubrics defined in table 2.2.1(vi) and the average marks of all sessions will be considered for awarding final internal assessment marks.

Table 2.2.1(vi): Rubrics used for Continuous Evaluation in every lab session

Parameter	Allocated Marks	Low	Medium	High
Execution	02	The given program was not code/debug/execute in the lab session	The given program was coded & debugged but not executed in the lab session	The given program was coded, debugged and executed in the lab session
		0 marks	**1-2 marks**	**2 marks**
Viva-voce	02	The student did not answered any viva questions asked	The student answered few viva questions asked	The student answered all viva questions asked
		0 marks	**0-1 marks**	**2 marks**
Record writing	06	The record was not submitted in the lab session	The record was submitted in the lab session but was incomplete (Wrong Program/Experiment)	Completed record was submitted in the lab session
		0 marks	**1-3marks**	**5 marks**

Stage 2: Lab Internal test (30 marks)

Lab Internals will be conducted at end of the semester after the completion of all the university specified experiment.

Student should pick a program from the pool and execute that program. The student should answer the Viva-voce asked. The marks are awarded for each lab internals based on rubrics defined in table 2.2.1 (vii) average marks of internal test and continuous evaluation marks will be considered for awarding final internal assessment marks.

Table 2.2.1(vii): Rubrics used for lab Internal Test

Parameter	Allocated Marks	Low	Medium	High
Program Write-up	05	The Student was not able to write the program/experiment	The Student was able to write the program/experiment with few mistakes	The Student was able to write the program/experiment correctly
		0 marks	2-3 marks	4-5 marks
Execution	20	The Student was not able to code/ debug/ execute the program	The Student was partially able to code/debug/execute the program	The Student was able to code/debug/execute the program
		0 marks	10-12 marks	18-20 marks
Viva-voce	05	The student did not answered any viva questions asked	The student answered few viva questions asked	The student answered all viva questions asked
		0 marks	1-2 marks	4-5 marks

G.Student feedback on teaching learning process and actions taken

- Student's feedback is taken from students on the effectiveness of teaching and subject learning from IQAC during the semester.
- The feedback is summarized and sent through principal to HOD to take necessary action.
- The HOD will discuss the feedback with faculties and gives some suggestions.
- This feedback is considered as part of self appraisal of the faculty member.
- The final report will be sent to IQAC through principal.
- Faculty feedback performance for every course is assessed from the students with various parameters.
- The parameters of Feedback includes:

1. Is faculty punctual to the class?
2. Does teacher come with adequate preparation for the class?
3. Does faculty use blackboard for illustration and solving the problems effectively?
4. Does the faculty solve problems from VTU Question paper in the class?
5. Does the faculty encourage student's interaction in the class?
6. Does faculty answer the question satisfactorily?
7. Does the faculty evaluate the bluebooks on time and give the solutions to the test questions?
8. What is your rating for the faculty?

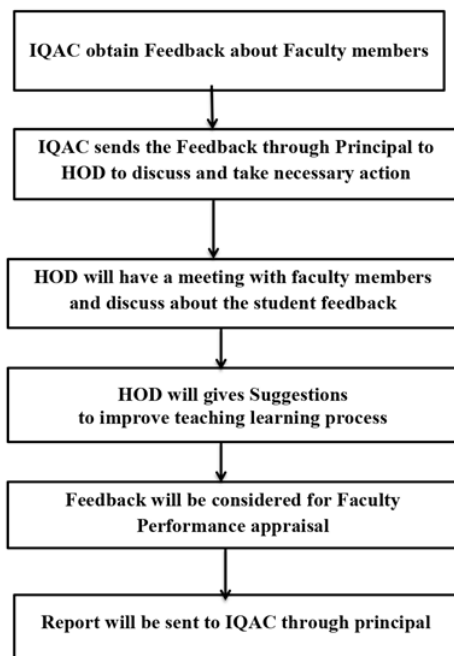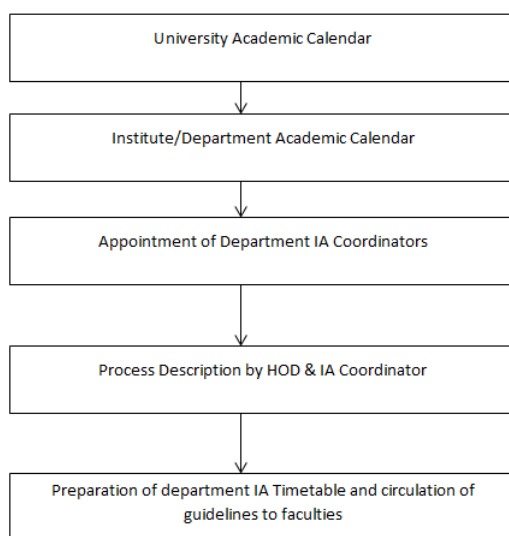The process for the student feedback on teaching learning in Figure 2.2.1h

Figure 2.1.1h: Process for the student feedback on teaching learning

2.2.2 Quality of internal semester Question papers, Assignments and Evaluation (20)

Institute Marks : 18.00

A. **Process for Internal Assessment:**

IA Schedule:

1. University Academic calendar will be circulated by VTU.
2. Principal and HoD will prepare institute academic calendar in-line with University Academic calendar to finalize the IA dates.
3. Appointment of department IA coordinator by respective Head of the department for IA conduction.
4. The following parameters of IA guidelines will be discussed by HOD with IA coordinator which involves:

- Preparing IA schedule
- Allotment of rooms and invigilators.
- Collecting blue books, question papers, scheme and solution as per schedule
- Required number of photocopies of the question papers has to be taken by IA Coordinators
- Recording absentee details.
- Display of IA
- VTU IA entry

5. Department IA coordinator will circulate and brief about the IA conduction with faculty members.
6. Internal Assessment schedule Process is shown in the figure 2.2.2a

```
┌─────────────────────────────────────┐
│     University Academic Calendar      │
└─────────────────────────────────────┘
                   │
                   ▼
┌─────────────────────────────────────┐
│  Institute/Department Academic Calendar │
└─────────────────────────────────────┘
                   │
                   ▼
┌─────────────────────────────────────┐
│  Appointment of Department IA Coordinators │
└─────────────────────────────────────┘
                   │
                   ▼
┌─────────────────────────────────────┐
│  Process Description by HOD & IA Coordinator │
└─────────────────────────────────────┘
                   │
                   ▼
┌─────────────────────────────────────┐
│  Preparation of department IA Timetable and circulation of │
│  guidelines to faculties              │
└─────────────────────────────────────┘
```

Figure 2.2.2a: Internal Assessment schedule Process

Internal Assessment Conduction Process:

1. The IA Coordinator will circulate the IA schedule to all faculties with the approval of HOD.
2. In-line with the circular the IA Coordinator will prepare IA time table and brought to the notice of all faculty members and students.
3. All the faculty members are instructed to prepare IA question paper along with scheme and solution. The same will be submitted to the HOD.
4. The submitted IA question papers will be reviewed and approved by the IA Committee and changes or corrections if any will be brought to the notice of concerned faculty members.
5. By Incorporating the changes or corrections if any, the IA question paper will be resubmitted to IA Committee for approval.
6. After the approval of IA question paper by IA Committee, IA will be conducted as per given schedule.
7. Faculty members will evaluate blue books as per the approved scheme and solution.
8. IA marks along with scheme of evaluation will be discussed with the students and grievances if any will be addressed by Course faculty.
9. Final IA marks will be displayed to the students.
10. Internal Assessment Conduction Process is shown in the figure 2.2.2b
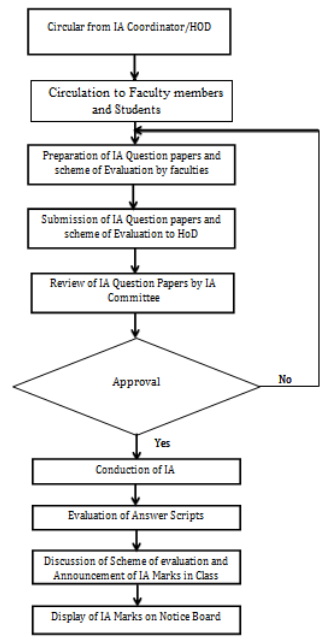
Figure 2.2.2b: -Internal Assessment Conduction Process

B. Process to ensure quality of IA Question Paper:
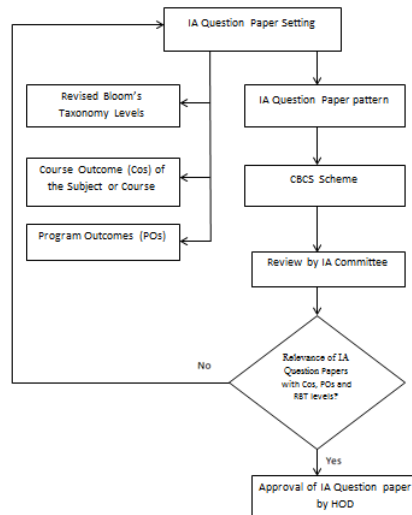
Figure 2.2.2c: Process for quality of internal assessment question paper

Description:

A question paper is the basic tool used in a test or examination. Question paper must be prepared in a way that can measure the change in the level of students' knowledge in a particular subject. The document as proof of attainment of course and program outcomes depends on several factors including course outcomes of the course, program outcomes, and mapping of COs with POs, quality of questions in the internal assessment to achieve the desired outcomes.

Table 2.2.2(i): CIE Marks for different schemes prescribed by VTU

Continuous Internal Evaluation			
Scheme	Maximum Marks for IA	Assignments	Total marks
2015	15	5	20

C. CO's coverage in Internal Assessment

- The Internal Assessment test is conducted based on the syllabus covered by the faculty.
- Based on the module coverage of each course the respective CO's will be aligned.
- The question paper will be set based on following considerations:

1. By keeping syllabus coverage plan as reference the Internal Assessment test question paper shall be prepared.

2. IA is conducted every 4th and 5th week of academic calendar as per the syllabus Coverage.

3. Table 2 shows the Maximum number of IA questions to be given along with Marks allocated for schemes prescribed by VTU.

4. The IA Questions shall be mapped to Course Outcomes (COs), Revised Blooms Taxonomy (RBT) Levels, and Program Outcomes (POs) to understand the level of attainment.

Table 2.2.2(ii): Maximum number of IA test questions and Marks

Scheme	2015
Maximum Number of Questions	5
IA1 Marks	40
IA2 Marks	40
IA3 Marks	40
Average IA Marks (A)	Average(Best of Two IA)*0.75
Assignments (B)	5
Total IA marks	(A+B)

D. Quality of Assignment and its relevance to CO's

- Assignments are integral part of the continuous assessment process to ensure that students apply and analyze the knowledge to raise the level of learning.
- The course faculty will look in to the syllabus content for setting the assignment questions.
- The assignment questions should be approved by HOD. After the completion of every module, assignment questions will be given to students, and student has to write & submit to the course faculty. The same will be evaluated and recorded by course faculty.
- Evaluation of the assignment according to rubrics defined and Attainment level based on following criteria.

Table 2.2.2(iii):Rubrics for evaluation of assignments

2015 Scheme Max Marks-5 Marks Scored	% of Students	Attainment Level
5	≥60	3
3 to 4	≥40 and <60	2
1 to 2	<40	1

2.2.3 Quality of student projects (25)   Institute Marks : 22.00

a) Identification of projects and allocation methodology to Faculty Members
- Head of the department, Project Coordinator & Faculty educates students with different verticals, domains and areas.
- The project coordinator advises the students to form a group of 2 to 4 members and identify the project area or title.
- Department encourages on undertaking relevant, achievable, time bound projects that attempt to solve recent technology in Computer Science & Engineering. Also students can refer reputed peer-reviewed journals. Such projects could also be extension of previous/on-going works also.
- Project coordinator lists the types of projects on the basis of Environment, Safety, Ethics, and category of project i.e. whether it is application based, Product Development based or Research based projects.
- Head of the department along with project coordinator depending upon the faculty specialization, allocate the guides for project team.
- Project coordinator along with guides finalizes the project titles and abstract.
- The students approach the guide and discuss their ideas.
- Teams are informed to submit the synopsis with presentation. If any corrections, the project team should modify and resubmit the synopsis.
- The head of the department will approve the project.
- The processes of student project is carried in final year as shown in figure 2.2.3a and table 2.2.3(i) gives project scheduling.
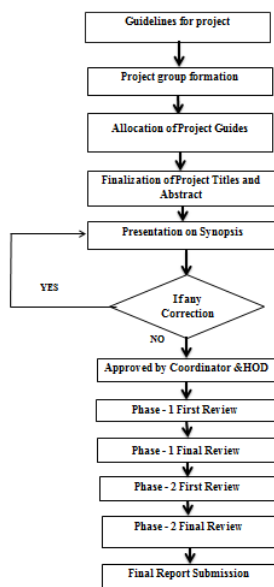
Figure 2.2.3a:: Process defined for Student Project work

Table 2.2.3 (i): Process of Project Schedule

Schedule	Task	Details
7th Semester		
2nd week	Call for project batch	Students are informed to form their batch.
4th week	Call for Project titles with abstract submission	Students are instructed to submit the title with abstract.
6th week	Guide allotment.	Guide allotment based on the domain and expertise.
8th week	Presentation of Synopsis	Presentations are reviewed by a Project coordinator, Head of the department and senior faculty along with Guide
13th week	Phase1 First Review	Review of requirement by guide and Coordinator
16th week	Phase1 Final Review	Project coordinator, Head of the department and senior faculty along with guide will review the requirements and Design of the project.
8th Semester		
8th week	Phase2 First Review	Review of progress regarding implementation & validation by guide and Coordinator
13th week	Phase2 Final Review	Review of Testing of project with complete presentation & Demonstration by a Project coordinator, Head of the department and senior faculty along with Guide.
15th week	Report submission	Submission of the final report duly signed by the guide, HOD, and Principal.

Initiatives taken

- The HOD, project coordinator and faculty motivates the students to carry out projects in house. If some students are keen in undertaking projects at industries are permitted.
- Project Coordinator and the Project Guide will examine the quality of the project work and ensure that the project is Societal and Environmental related.
- Institute conducts a Project Exhibition called "Meraki" which recognizes and encourages students in developing innovative projects. In the exhibition the projects are evaluated by experts from external. Best project is selected and awarded based on the quality of the project.
- The students are encouraged to participate in conferences to present and publish their work.
- Also the students are motivated to publish in international journals.
- Motivated to apply for funds under various external funding schemes such as KSCST, VTU, etc.

b) Types and relevance of the projects and their contribution towards attainment of POs and PSOs

- Current academic projects are mapped to POs and PSOs.
- Each project is evaluated with internal marks and is graded according to their project quality and with their contribution towards attainment of PO's.
- The below table 2.2.3(ii), 2.2.3(iii), 2.2.3 (iv) gives a list of few student projects of 2019-20, 2018-19 and 2017-18, which are contributed towards attainment and table 2.2.3(v) gives domain analysis of projects

Table 2.2.3(ii): List of few student projects – 2019-20

Sl. No.	Name and USN of students	Project Title	Environment Related	Ethics	Societal Safety	Supported POs	Supported PSOs

Sl. No.	Name and USN of students	Project Title	Environment Related	Ethics	Societal Safety	Supported POs	Supported PSOs
1	KarnamYashas S (1R116CS057) Srinivas G (1R115CS057) Nithish Kumar N G (1R116CS058) Akshay N Mohan (1R115CS002)	SENTIMENT ANALYSIS OF TWITTER DATA USING APACHE SPARK FRAME WORK			√	PO1, PO2 PO3, PO4 PO5, PO6 PO8, PO9 PO10, PO11, PO12	PSO1 PSO2
2	Sahana (1RI15CS045) Kannan S (1R116CS05) Arjun N (1RI14CS038) Vaishnavi N (1R116CS050)	AUTONOMOUS ROVER WITH FIELD PROTECTION AND CROP HEALTH MONITORING SYSTEM	√	√	√	PO1, PO2 PO3, PO4 PO5, PO6 PO8, PO9 PO10, PO11,	PSO1 PSO2
3	Sona Sara Thomas (1R115CS053) Tejashwini R (1R117CS401) KumariPriya (1R116CS023) SayantaniSarkar (1R116CS040)	GPS BASED SOLDIER TRACKING AND HEALTH INDICATION SYSTEM		√	√	PO1, PO2 PO3, PO4 PO5, PO6 PO8, PO9 PO10, PO11,	PSO1 PSO2
4	Bindushree P M (1R116CS011) Hemalatha R (1R116CS020) Likitha Y (1RI16CS027) Amritsharma (1RI16CS055)	INNOVATIVE CREATION OF VIRTUAL PERSONAL ASSISTANCE FOR NEW ERA		√	√	PO1, PO2 PO3, PO4 PO5, PO6 PO8, PO9 PO10, PO11, PO12	PSO1 PSO2

Table 2.2.3 (iii): List of few of student projects – 2018-19

Sl. No.	Name and USN of students	Project Title	Environment Related	Ethics	Societal Safety	Supported POs	Supported PSOs
1	Hemalatha C (1RI15CS021) Gayathri H D (1RI15CS018) Ashwini S D (1RI15CS009) Mary Roopini A (1RI15CS030)	A Modern Real Time Water Quality Monitoring System Using IoT	√	√	√	PO1, PO2 PO3, PO4 PO5, PO6 PO8, PO9 PO10, PO11, PO12	PSO1 PSO2
2	Chandana M S (1RI15CS014) Indu B (1RI15CS022) Nayana H V (1RI15CS032) Soundarya V R (1RI15CS054)	Precision Agriculture Using Soil Moisture Measuring System	√	√	√	PO1, PO2 PO3, PO4 PO5, PO6 PO8, PO9 PO10, PO11, PO12	PSO1 PSO2

Sl. No.	Name and USN of students	Project Title	Environment Related	Ethics	Societal Safety	Supported POs	Supported PSOs
3	AnkitaShukla (1RI15CS005) Rahul M (1RI15CS036) Shwetha M (1RI15CS052) Sowmya M V (1RI15CS055)	Blind Navigation System Using Hurdle Recognition		√	√	PO1, PO2 PO3, PO4 PO5, PO6 PO8, PO9 PO10, PO11, PO12	PSO1 PSO2
4	Akhila P K (1RI15CS001) Divya S (1RI15CS016) RichaKumari (1RI15CS041) Rohith E C (1RI15CS043)	Child Monitoring and Tracking System		√	√	PO1, PO2 PO3, PO4 PO5, PO6 PO8, PO9 PO10, PO11,	PSO1 PSO2

Table 2.2.3(iv): List of few student projects – 2017-18

Sl. No.	Name and USN of students	Project Title	Environment Related	Ethics	Societal Safety	Supported POs	Supported PSOs
1	Alvira Ansari (1RI14CS001) Faiyaz Ahmed (1RI14CS009) GauravArya (1RI14CS010)	Intelligent Traffic Light Control Using Embedded System	√	√	√	PO1, PO2 PO3, PO4 PO5, PO6 PO8, PO9 PO10, PO11, PO12	PSO1 PSO2
2	Dhanya Rani A (1RI14CS005) Rashmi V (1RI14CS027) SheethalGowdaN (1RI14CS031) Vinduja V (1RI14CS037)	Energy Optimal Clustering Algorithm for Multi-Hop Wireless Sensor Network Using Fuzzy Logic		√	√	PO1, PO2 PO3, PO4 PO5, PO6 PO8, PO9 PO10, PO11,	PSO1 PSO2
3	Lavanya M R (1RI14CS018) Mamatha C G (1RI14CS019) UshaPandith R (1RI14CS035) PoonamKumari (1RI15CS404)	Securing Cloud Data Under Key Exposure		√	√	PO1, PO2 PO3, PO4 PO5, PO6 PO8, PO9 PO10, PO11,	PSO1 PSO2
4	Dinesh S (1RI14CS008) Kiran Kumar YN (1RI14CS016) Deepika S (1RI15CS401) Kavya C 1RI14CS014	An Efficient and Fine-Grained Big Data Access Control Scheme With Privacy-Preserving policy		√	√	PO1, PO2 PO3, PO4 PO5, PO6 PO8, PO9 PO10, PO11,	PSO1 PSO2

Table 2.2.3(v): Domain Analysis of Projects

Sl. No.	Project Domains	No of Projects			Mapping with POs/PSOs
		2019-20	2018-19	2017-18	
1	Android Application		1	1	PO1-PO12, PSO1, PSO2

2	Big Data Analytics	3	1	2	PO1-PO12 PSO1, PSO2
3	Cloud Computing	1	1	2	PO1-PO12 PSO1, PSO2
4	Computer Networking and Network Security			2	PO1-PO12 PSO1, PSO2
5	Image Processing	1			PO1-PO12 PSO1, PSO2
6	Internet of Things	3	5		PO1-PO12 PSO1, PSO2
7	Machine Learning		4		PO1-PO12 PSO1, PSO2
8	Natural Language Processing & Artificial Intelligence	1	1	1	PO1-PO12 PSO1, PSO2
9	Web Application		1	1	PO1-PO12 PSO1, PSO2
10	Block chain Technology	1			PO1-PO12 PSO1, PSO2
11	Other Applications	2	1	2	PO1-PO12 PSO1, PSO2
	Total	12	15	11	

c) Process of Monitoring and Evaluation:

Process of Monitoring

- All project team should submit the final synopsis to the guide, the project guides gives suggestions towards the improvement of project.
- The progress of a project is monitored by the guide on weekly basis and they have to report the updates to the respective guide every weekend.
- The project guide and coordinator gives suggestions to students from time to time that they need to incorporate before the submission of final report.
- The project guide, coordinator along with head of the department will evaluate the project work.
- Monitoring of project work will be done for both ODD and Even semesters of final year.

ii) Process of Evaluation

a) Internal Evaluation:

The project work and the report will be evaluated by guide, coordinator and head of the department in both ODD and Even semesters of final year. The table 2.2.3(vi) gives the evaluation of project work

Table 2.2.3(vi): Evaluation of Project Work

Review No	Agenda	Review Assessment weightage (Marks)
1	Project Synopsis	-
2	Project Phase1-First review	50% (50)
3	Project phase1-Final review	50% (50)
ODD Sem-Total Internal Weightage (Marks)		100% (100)
4	Project phase2-First review	50% (50)
5	Project phase2-Final review	50% (50)
Even Sem-Total Internal Weightage (Marks)		100%(100)

b) External Evaluation:

The Final Projects are evaluated by Internal and External examiners as appointed by the university.

The external examiner is from other affiliated college.

The examiners conduct viva-voce examination for the students. The project teams will come forward and defend the carried out project work. Based on the performance in viva-voce examination, final marks are awarded to the students that are sent to university.

d) Process to assess individual and team performance

The Individual and team performance is assessed in the project work based on the following.

Evaluation is carried out based on various criteria such as.

a. Problem Formulation
b. Planning
c. Technical skills
d. Communication

- Presentation
- Documentation

e. Team work

- Group participation
- Peer review
- Societal or environmental issues
- Individual Roles and Responsibilities

Evaluation is carried out on individual basis as well as on team performance. At the end of the academic year, students present and demonstrate their work to the external and internal examiners appointed from the university. The assesment will be done based on the below rubrics.

Table 2.2.3(vii): Rubrics1 for Project Phase 1 first Assessment

Agenda	Max. Marks	Rubric Parameter	Level of Marks				
			Excellent	Very Good	Good	Average	Poor
			Review-1				
Problem Statement	5	Identifying the Problems in the selected domain	Problem statement well defined 5 marks	Problem statement has slight changes 4 marks	Problem stateement has few changes 3 marks	Problem statement has major changes 2 marks	Problem statement should be modified 1 mark
Scope & Objectives	5	The Scope and objectives to be identified	Scopes and objectives are identified correctly 5 marks	Scope and objectives are identified but objectives need few changes 4 marks	Scope and objectives are identified but require moderate changes 3 marks	Scope and objectives are identified but require lot of changes 2 marks	Scope & objectives are not defined 1 mark
Requirements	20	Gathering all the Hardware and Software requirements	Gathered Hardware & Software requirements are correct 20 marks	Hardware requirements are approriate, where as Software requirements can be modified 18 marks	Hardware requiremens & Software requirements need few changes 16 marks	Hardware requirements and software requirements are not well defined 14 marks	Hardware & Software requirements are not well defined 12 marks
Presentation	10	Preparation of Slides, Presentation Consistency	Relevant and consistent 10 marks	Relevant & partially consistent 8 marks	Partially relevant & consistent 6 marks	Partially relevant & partially consistent 4 marks	Partially relevant & inconsistent 3 marks
Viva	5	Handling Questions	Answered all questions with proper justification 5 marks	Answered 80% questions 4 marks	Answered 60% questions 3 marks	Answered 40% questions 2 marks	Answered 20% questions 1 mark
Total Weightage(Marks)		50					

Table 2.2.3(viii): Rubrics2 for Project Phase1 final Assessment

Agenda	Max. Marks	Rubric Parameter	Level of Marks				
			Excellent	Very Good	Good	Average	Poor
			Review-2				
Methodologies	15	The Particular Method/Technique involved been adopted	Methodology Properly followed & justified 15 marks	Methodology Properly followed & Justified partly 12 marks	Methodology Properly followed & Not Justified 10 marks	Methodology Partially followed and Partially Justified 8 marks	Methodology Partially followed and Not justified 6 marks
UML Design	20	Conceptual design, Division of problem into modules, Selection of design framework.	Properly Followed & Properly implemented 20 marks	Properly Followe d & implemented partly 18 marks	Properly followed & Not implemented 16 marks	Partially Followed and Partially implemented 14 marks	Partially followed and Not impleme nted 12 marks
Presentation	10	Preparation of Slides, Presentation Consistency	Relevant and consistent 10 marks	Relevant & partially consistent 8 marks	Partially relevant & consistent 6 marks	Partially relevant & partially consistent 4 marks	Partially relevant & inconsistent 3 marks
Viva	5	Handling Questions	Answered all questions with proper	Answered 80%	Answered 40%	Answered 40%	Answered 20% questions

			justification 5 marks	questions 4 marks	questions 2 marks	questions 2 marks	1 mark

Total Weightage(Marks)	50						

Table 2.2.3(ix): Rubrics3 for Project Phase2 first Assessment

Agenda	Max. Marks	Rubric Parameter	Level of Marks				
			Excellent	Very Good	Good	Average	Poor
			Review-3				
Implementation	20	Executing project as per work plan.	Project implementation is complete 20 marks	Project implementation is complete with few bugs 16 marks	Project implementation is complete with few issues 14 marks	One module features developed is not complete 12 marks	Most of the features are not yet complete. 10 marks
Verification & Validation	15	Software system satisfies specifications and standards as defined in requirements phase.	Relevant and consistent 15 marks	Relevant & partially consistent 12 marks	Partially relevant & consistent 10 marks	Partially relevant & partially consistent 8 marks	Partially relevant & validation is inconsistent 6 marks
Presentation	10	Preparation of Slides, Presentation Consistency	Relevant and consistent 10 marks	Relevant & partially consistent 8 marks	Partially relevant & consistent 6 marks	Partially relevant & partially consistent 4 marks	Partially relevant & inconsistent 3 marks
Viva	5	Handling Questions	Answered all questions with proper justification 5 marks	Answered 80% questions 4 marks	Answered 40% questions 2 marks	Answered 40% questions 2 marks	Answered 20% questions 1 mark
Total Weightage(Marks)	50						

Table 2.2.3(x): Rubrics4 for Project Phase2 final Assessment

Agenda	Max. Marks	Rubric Parameter	Level of Marks				
			Excellent	Very Good	Good	Average	Poor
			Review-4				
Testing	10	Testing involves unit level, system level and integration level	Relevant and consistent 10 marks	Relevant & partially consistent 8 marks	Partially relevant & consistent 6 marks	Partially relevant & partially consistent 4 marks	Partially relevant & validation is inconsistent 2 marks
Demonstration	10	Project Demonstration	Relevant and consistent 10 marks	Relevant & partially consistent 8 marks	Partially relevant & consistent 6 marks	Partially relevant & partially consistent 4 marks	Partially relevant & validation is inconsistent 2 marks
Presentation	5	Preparation of Slides, Presentation Consistency	Relevant and consistent 5 marks	Relevant & partially consistent 4 marks	Partially relevant & consistent 3 marks	Partially relevant & partially consistent 2 marks	Partially relevant & inconsistent 1 mark
Viva	5	Handling questions	Answered all questions with proper justification 5 marks	Answered 80% questions 4 marks	Answered 40% questions 3 marks	Answered 40% questions 2 marks	Answered 20% questions 1 mark
Project Report	20	Report format	Relevant and consistent 20 marks	Relevant & partially consistent 18 marks	Partially relevant & consistent 16 marks	Partially relevant & partially consistent 14 marks	Partially relevant & inconsistent 12 marks
Total Weightage (Marks)	**50**						

e) Quality of completed projects/working prototypes

All projects carried out by the students are categorized on the basis of types of projects such as application based projects, products based, research based and review based. The summary of analysis report of the projects is given in table 2.2.3(xi) is describing the number of projects completed by students of batch categorized as product based and research based.

Table 2.2.3(xi): Analysis support of projects

Academic Year	Category of projects		
	Product	Research	Review
2019-20	6	4	2
2018-19	9	5	1
2017-18	8	2	1

The list of best project are shown in the below table 2.2.3(xii) and sample copy of best project is shown in figure 2.2.3b and 2.2.3c.

Table 2.2.3(xii): Best projects

Sl. No.	Name of the students	Title of the project	Project Guide	POs & PSOs
1.	Mr.Kiran Kumar Mr.Dinesh Ms.Kavya Ms.Deepika	An Efficient and fine rained Big Data Access Control Schema With Privacy Preserving Policy	Dhananjaya M K	PO1, PO2 PO3, PO4 PO5, PO6 PO9 PO10, P11, P12, PSO1, PSO2
2.	Mr.AlviraAnsari, Mr.FaiyazAhamed, Mr.GauravArya	Intelligent Traffic Light Control By Embedded Systems	Prema C	PO3, PO4 PO5, PO6 PO8, PO9 P11, P12, PSO1, PSO2
3	Mr. George James Mr. Birbal Subba Mr. Asraar Contractor Ahemd Mr. Pradip Gharti Magar	Image Processing Based Solar Powered Fire Detection and Extirpation Robot	Shruthi S	PO1, PO2 PO3, PO4 PO5, PO6 PO8, PO9 PO10, P012, PSO1, PSO2

Figure 2.2.3b: Sample copy of Best project

Figure 2.2.3c: Sample copy of Best project

F. Evidences of papers published /Awards received by projects, etc.

The below table 2.2.3(xiii) shows the evidences of publications, awards and recognitions received by the students.

Table 2.2.3(xiii) Evidences of publications, awards and recognitions received by the students.

SI No	Students Name	ISSN	Journal Name	Year	Title
			2019-20		
1	George james, Asraar Contractor, Birbal Subba, Pradip Ghatrimagar	ISSN :2320-9801	International Journal of Innovative Research in Computer and Communication Engineering	July 2020	Adaptive Deep Residual Network for Signal Image Super Resolution
2	Akshya N Mohan, Srinivas G	ISSN :2320-9801	International Journal of Innovative Research in Computer and Communication Engineering	July 2020	Detection of Plant Leaf Dieses by using Image Processing Approaches
3	Sona sara Thomas, Kumari Priya, Rajala Tesaswini, Sayantani Sarkar	ISSN :2320-9801	International Journal of Innovative Research in Science, engineering and Technology	July 2020	Wireless communication UAVs
4	Varsha S, Supriya,Asha	ISSN :2320-9801	International Journal of Innovative Research in Science, engineering and Technology	July 2020	Charging station for E vehicle using Solar with IOT Multiple Users
5	Ankit Yavdav, Rakshit Koul, Ritu Raj, Vishal Gupta	ISSN :2320-9801	International Journal of Innovative Research in Science, engineering and Technology	July 2020	Tracking and Warning system for Fisherman Using IOT
6	Lakshmishri B L, Pooja R R, Vaanyashree P M,Yashaswini	ISSN :2320-9801	International Journal of Innovative Research in Science, engineering and Technology	July 2020	Bionic EYE: Retinal prosthesis to Restore Eyesight
7	Imran Khan, Season Rijal, Shreejit Pillai, Umesh kandel	ISSN :2320-9801	International Journal of Innovative Research in Science, engineering and Technology	July 2020	Enhanced BCI Intelligent Wheelchair System based On Alpha wave and SSVEP EEG Signals
8	Kannan S, Arjun N, Vaishnavi N, Sahana T	ISSN :2319-8753	International Journal of Innovative Research in Science, engineering and Technology	July 2020	Automatic gas Leakage Detection and Booking on Gas Level using IOT
9	Karanam yashas C, Nithish Kumar N G	ISSN :2319-8753	International Journal of Innovative Research in Science, engineering and Technology	July 2020	Prediction of Software Defect using supervised Machine Learning practices

10	Rajeshwari C, Akshatha M R	ISSN :2320-9801	International Journal of Innovative Research in Computer and Communication Engineering	July 2020	A Study on Machine learning Algorithms, LDTM, and DATA Science Model for Mental health Application
11	Bindushree P M, Likitha Y, Hemalata R	ISSN :2320-9801	International Journal of Innovative Research in Computer and Communication Engineering	July 2020	Innovative Creation of Virtual Personal Assistant for New ERA
12	Imrann Khan Season Riajal, Shreejith Pilllai, Umesh Kandel	ISSN :2319-8753	International Journal of Innovative Research in Science, engineering and Technology	July 2020	Robust Early Detection Mechanism for IOT enabled Landslide Monitoring using Lora Technology
13	Sona sara Thomas, Kumari Priya, Rajala Tejashwini, Sayantani sarkar	ISSN :2319-8753	International Journal of Innovative Research in Science, engineering and Technology	July 2020	GPS based Solider Tracking and Health Indication System
14	Prathiba I Biligi,prithika Adikari,Repshika Pardhan	ISSN :2319-8753	International Journal of Innovative Research in Science, engineering and Technology	July 2020	Phishing Detection using Improved RCNN Model with Multilevel vectors and Attention Mechanism
15	Ankit Yadav,Rakshit Koul,Ritu Raj,Vishal Gupta	ISSN :2319-8753	International Journal of Innovative Research in Science, engineering and Technology	July 2020	Smart glass for visually Impaired
16	George james, Birbal subbha, Asraar Contractor, Pradip magar	ISSN :2319-8753	International Journal of Innovative Research in Science, engineering and Technology	July 2020	Image processing Based Solar Powered Fire Detection and Extirpation Robot
17	Aaksah Kumar, Sathya Murthy, Prajwal, Karthik	ISSN :2319-8753	International Journal of Innovative Research in Science, engineering and Technology	July 2020	An Efficient and Secured OTP Enabled File Sharing Service over Big data Environment
2018-19					
18	Vishal Gupta, Akash K Singh, Asraar Contractor	ISSN:0972-1347	IJICS, Pune, Maharashtra	May2019	Deep Machine Learning in Games in Artificial Intelligence
19	Avinash Gaurav, Amith Kumar Shani, Julius Daimary	ISSN: 2279-543	International Journal of Scientific Research and Reviews	May2019	Cloud based Android Application with NFC for Remote Access
20	V Joel, Rajat, Gangawani, Munshad Ali	ISSN :2279-543	International Journal of Scientific Research and Reviews	May2019	Smart Garbage Monitoring System using IOT
21	Baba Bharath G K,Vaibhav Reddy K V,Vinutha H Nagaraj T	ISSN :2279-543	International Journal of Scientific Research and Reviews	May2019	Predicting Multiple Dieses Using Machine Learning Techniques
22	Ankit Shukla, Rahul M, Sowmya M V,	ISSN: 2279-543	International Journal of Scientific Research and Reviews	May2019	Blind navigation System using Hurdles Recognition
23	Sathish P, Nikhil B K, Varun Bharadwaj H R,Srikanth B R	ISSN: 2279-543	International Journal of Scientific Research and Reviews	May2019	Online Variation Interface for The Hierarchical Topics Detection Frames work
24	Baba Bharath G K,Vaibhav Reddy K V,Vinutha H Nagaraj T	ISSN: 2279-543	International Journal of Scientific Research and Reviews	May2019	Comparative Performance of Machine Learning and Deep Learning Algorithm on Imbalanced Handwritten Data

25	Krishan Rajbanshi, Milan Shrestha, praksah Rayamajhi Raghav Kateel	ISSN: 2279-543	International Journal of Scientific Research and Reviews	May2019	Spider RR College Networking Application
26	Drawpada Sharma, Smrithi Ghimire, Tanaya Patra Yojana Aryal	ISSN :2279-543	International Journal of Scientific Research and Reviews	May2019	Autonomous Vehicle with Traffic Density Avoidance and Live Video Streaming using Artificial Intelligence with Embedded C
27	Prerana D, Vasuki E M, Prathihba Mallappa Alakanur	ISSN: 2279-543	International Journal of Scientific Research and Reviews	May2019	Agronomy Monitory Robot Using IoT Technology
28	Biswas Subedi, Rupesh Timalsina, Archana Bhatta, Salim M Gumbo	ISSN: 2279-543	International Journal of Scientific Research and Reviews	May2019	Generic Application for Sensor Application using IOT
29	Hemalatha C, Ashwini Shridhar Deshapande, Mary Roopini A, Gayathri H D	ISSN: 2279-543	International Journal of Scientific Research and Reviews	May2019	A Modern Real Time water Quality Monitoring System using IOT
30	Bidhu S,harikireethi B K, Irfan Pasha F, kavya R	ISSN: 2279-543	International Journal of Scientific Research and Reviews	May2019	An Effective Big Data frame Work based on Farmer's Agriculture Context
31	Chandana M S, Indu B, Nayana H V,Soundarya V R	ISSN: 2279-543	International Journal of Scientific Research and Reviews	May2019	Cloud Based Soil Moisture Measuring System Using IOT In Indian Agriculture
			2017-18		
32	Aman A. Sexena, Jeevan B, Vinay P, Vageesh N J	ISSN 2394 -2320	International Journal of Engineering Research in Computer Science and Engineering	June 2017	Analyzing Tweets for Real Time Event Detection and Development of Earthquake Reporting System
33	Krishna Mohan Shah, Gaurav Bhusal, Kirti Lata,J Megahana Patel	ISSN 2394 -2320	Institute For Engineering Research and Publication	June 2017	Eliminating Duplicate Data in cloud Storage with Dynamic Ownership and Security
34	Arvind Kumar, Chauhan Akash, Nithin M E,Pashanth G D	ISSN 2394 -2320	International Journal of Engineering Research in Computer Science and Engineering	Aug 2017	Plant identification System using Leaf Feature Plant

Few Awards & Recognitions				
Sl. No.	Project Title	Organization	Award/Recognition	Students	year
1	An Efficient and fine rained Big Data Access Control Schema with Privacy Preserving Policy	VTU Belgum Karnataka	Recognition	Mr. Kiran Kumar Mr. Dinesh Ms. Kavya Ms. Deepika	2017-18
2	Intelligent Traffic Light Control by Embedded Systems	VTU Belgum Karnataka	Recognition	Mr. Alvira Ansari, Mr. Faiyaz Ahamed, Mr. Gaurav Arya	2017-18
3	Image Processing Based Solar Powered Fire Detection and Extirpation Robot	KSCST, Bengaluru	Recognition	Mr. George James Mr. Birbal Subba Mr. Asraar Contractor Ahemd Mr. Pradip Gharti Magar	2019-20

4	Smart glass for visually Impaired	KSCST, Bengaluru	Recognition	Mr. Ankit Yadav, Mr. Rakshit Koul, Mr. Ritu Raj, Mr. Vishal Gupta	2019-20
5	Deep Learning for the detection of Covid 19 using Chest radiographs	IJIRSET, Chennai, Tamil Nadu	Awarded as Best Paper	Mr. Rajeshwari C, Mr. Akshatha M R	2019-20
6	Innovative Creation of Virtual Personal Assistant for New ERA	IJIRCCE, Anakaputhur, Tamil Nadu	Awarded as Best Paper	Mr. Bindushree P M, Ms. Likitha Y, Mr. Hemalata R	2019-20

2.2.4 Initiative related to industry interaction (15)

Industry Initiatives

Every Semester the department organizes Seminars, Guest Lecture, Workshops, technical talk faculty development and Student development programs through industry experts. The table 2.

Sl. No.	Organization	Year	
1	Acranton Technologies Pvt. Ltd.	2020 Two Years	
2	SST Technologies	2020 Life Long	
3	Karunadu Technologies Pvt. Ltd.	2020 Lifelong	
4	Chira Information Technology	2019 Three Years	
5	Livewire	2018 Three Years	
6	IDP Education Pvt Ltd	2018 One Year 2020 Renewal for Two Years	
7	4NGLE Consultancy Services	2018 Three Years	

8	Jet King	2017 For One Year Renewal in 2019 Three Years	
9	Parvam Consultant Tech Pvt. Ltd.	2017 Lifelong	
10	Manyathy Business Solutions	2017 Life Long	
11	TCS ION	2017 Life Long	
12	Karnataka small scale Industry Association	2017 for One Year	vSUGomP1yP5IH6RyH_0&oq=karnataka+small+&gs_lcp=Cgdnd3Mtd2l6EAEYADILCC4QgAQQxwEQrwEyBQgAEIAEMgUIABCABDIFCAAQgAQyBQgAEIAEMgU
13	ISM Univ	2017 Three Years	
14	IJSER International Journal	2016 Three Years	

Table 2.2.4(ii): Industry Experts Interaction with program

Sl.No	Year	Program Name	Industry Expert	No of Beneficiary	Date	No. of Participants
1	2019-20	Seminar on IT Technology and Emerging Trends	Mr. Ameet Gogi, Business Head, Livewire Company, Bengaluru	91	30/08/2019	91
2	2019-20	Career In Cyber Security	Mr. Vishal Pradhan, Senior Security Engineer/Team Lead, QOS Technology, Bengaluru	137	19/08/2019	137
3	2019-20	Seminar on Xcelarator Skill Augmentation Program	Mr. Dipraj Mukherjee, Manager, Xcelerator, Bengaluru	87	20/09/2019	87
4	2019-20	3 days Coures on "3d Experiences Flatfrom in Aircraft and Aerospace Engineering"	Dr. Nataraj Raman, Chief Executive Officer, (CoE A&D) Bengaluru	100	24/10/2019,30/10/201 to 31/102019	100

5	2019-20	Hands on Workshop on "Hands on Machine learning using Anaconda Tool"	Mr. Venkat Vishwanath Palli, Programming Analyst Lead, Qualcomm, Bengaluru	43	08/11/2019	43
6	2019-20	Work shop on" Full Stack Web Development"	Mr. Ameeth Gogi, Business Head, Livewire Company, Bengaluru	42	15/11/2019 to 16/11/2019	42
7	2019-20	FDP on "Embedded System Design and IOT"	Dr. Srinivas Shetty, SST Technology, Bengaluru	45	04/02/2020 to 05/02/2020	45
8	2019-20	Seminar on "Introduction to Python and Machine Learning"	Mr. Sudrshan, Manager, Chira Infromation Technology, Bengaluru	41	19/02/2020	41
9	2019-20	FDP on "Block Chain Technology"	Mr. Ramesh Gopal, Block Chain Training Head, Nvest labs, Bengaluru Mr. Sharath Krishna, CEO, Nvestlabs, Bengaluru	41	26/02/2020	41
10	2019-20	Technical Seminar on "Java Program"	Mrs. Sripriya Mathan, Founder & Chief, Instructor of Sristi Technology, Bengaluru	45	07/03/2020	45
11	2019-20	FDP on "Rapid Application development using Oracle ADF"	M. Pohit Santhosh, Technology Director, Parvam Consultant Pvt.Ltd, Bengaluru	35	20/05/2020 to 22/05/2020	35
12	2019-20	SDP on" THE Flutter Bootcamp"	Mr. Amith K S, Managing Director, Manyathy Business Solutions, Bengaluru	72	27/05/2020 to 28/05/2020	72
13	2019-20	SDP on "Internet of Things with hands On Session"	Mr. Sapthagireesh D M, Tech lead, Acranton Technologies, Bengaluru	50	18/06/2020	50
14	2019-20	Workshop on "Personality Development and Resume Building"	Mr. Mohammed Habbeb, Technology Director, Parvam Consul Tech Pvt Ltd, Bengaluru	100	30/06/2020	100
15	2019-20	Certification program on "Natural Language Processing with Python"	Mr. Thiyagu Chandran, Data Analyst, Accenture, Chennai, Tamilnadu	214	01/07/2020 to 11/07/2020	214

16	2019-20	Career Awareness on "Classroom without boundaries"	Ms. Christy Martina J, Manager, HR & Training, Caliber Minds Technologies, Coimbatore	92	17/07/2020	92
17	2019-20	2 Days Workshop on "Data Masking and Informatica Tools"	Mrs. Bhagya R, Technical Lead, EVERY India Pvt ltd, Bengaluru	104	18/07/2020 to 19/07/2020	104
18	2019-20	Technical Seminar on "Wireless Communication and Networking"	Mr. Harish N, CTO, Karunadu Technologies Pvt Ltd, Bengaluru	71	24/07/2020	71
19	2019-20	Technical Seminar on "Telecom Network Synchronization"	Ms. Shwetha S S, Software Engineer, Avaya, Bengaluru	60	25/07/2020	60
2018-19						
20	2018-19	Seminar on "Exposure to Entrepreneurship Activity"	Mr. Amarendra Kumar, Founder & CEO, Telenoc Solutions, Bengaluru	127	23/08/2018	127
21	2018-19	One Day Workshop Program on" BIG DATA AND HADOOP"	Mr. Nilesh Lumar Gupta, Head of Operations, EduNextgen Bengaluru	56	03/10/2018	56
22	2018-19	Workshop on "Innovation and manufacturing Startups"	Dr. T V Prabhakar, Principal Research Scientist & Head of the MSME, Center of Excellence Bengaluru Sri. Mohan Krishna Head of CEO-Data Science & Artificial Intelligence, NASSCOM, Bangalore H V Amanda Murthy Dy Dir(retd), M/o MSME, GOI Bengaluru K N Mr. Manjunath, Lead Manager, Canara Bank, Bengaluru	5	15/02/2019	5
23	2018-19	Seminar on "Introduction to Da0a Science"	Mr. Prithivi Raj, GE-Digital, Bengaluru	81	16/02/2019	81
24	2018-19	Seminar on "Hadoop Eco System"	Mr. Ramu K, Module Lead, Mind Tree, Bengaluru Mr. Vasanth, Application Developer, Accenture, Bengaluru	71	02/03/2019	71

25	2018-19	Seminar on "An Introduction to Java Script & Python"	Mr. Theodore Manning Louis, Bangalore	69	03/04/2019	69
26	2018-19	Technical Talk on "Computer Networks & Network Security"	Mrs. Susitna, Jetking, Bengaluru	104	04/04/2019	104
27	2018-19	Technical Talk on "Embedded Systems"	Mr. Sanjay Kumar, Founder, Jyothi Embedded labs, Bengaluru	46	05/04/2019	46
28	2018-19	Workshop on Arm7 process and its Application	Dr. Sreenivasa Shetty, SST Technologies, Bengaluru	37	24/04/219	37
29	2018-19	Workshop on "Python Application Development using Django & SQLite"	Mr. Ashoka Kumar K Technical Head, XON Lab, Bengaluru	48	25/04/2019	48
			2017-18			
30	2017-18	Workshop on "JAVA Application Development"	Mr. Rajesh T, Corporate JAVA Trainer, Start Career, Bengaluru	60	13/04/2017	60
31	2017-18	Handson workshop on Networking	Mr. H A Abdul Sajid, Jetking, Bengaluru	51	27/10/2017 to29/10/2017	51

Impact analysis of industry institute interaction

i. Acquires skills in communication, management and teamwork

ii. Apply theoretical knowledge in industrial applications

iii. Practice ethical, health safety environment and professional work culture.

iv. A few of the students who underwent internship got placed in related industry.

v. Learn preparing the document and presentation.

2.2.5 Initiative related to industry internship/summer training (15)   Institute Marks : 13.00

a) Industrial Training and Visits for students

The department organizes visits for students to relevant organizations/companies to enable the students to experience the practical implementation of theoretical knowledge in real world. This gives the main sight of the work culture ethics prevailing in Industries. The below table 2.2.5(i) shows the indistry visits of the students.

Table 2.2.5(i): Industry Visits

Sl. No.	Place	Date	No of Students
1	Visit to IISC for OPEN DAY, Bengaluru	29th February 2020	43
2	ITI Ltd. Bengaluru	8th November 2019	37
3	Visit BSX-6th, Bengaluru Expo-2018, BIC, Bengaluru	7th September 2018	50
4	Visit BSX-6th, Bengaluru Expo-2018, BIC, Bengaluru	8th September 2018	45
5	Visit to Solar Power Plant, Shivanasamudra	25th March 2018	50
6	Visit to ISM UNIV, Bengaluru	15th March 2018	30
7	Visit to "National Level Project Exhibition and Conference"	11th May 2018	10

b) Industrial /Internship /Summer Training

Students had undergone Industry internship/summer training of their areas of interest/ specialization at the end semester for duration of 4 to 6 weeks. In addition to this, the department organizes training programs related to emerging industry trends and job functions. External trainers from reputed industrial organizations bring the latest technological evolutions to the students. Internship details carried at industry are shown in below table 2.2.5(ii).

Table 2.2.5(ii): Internship details carried at industry

Sl.No	Title of the Internship	Name of the partnering institution/ industry /research lab with contact details	Duration (From-To)	Student Name
1	Online shoe marketing	4NGLE Software Consultancy Pvt.Ltd, #4, SUNRISE COMPLEX, 6TH BLOCK, 2nd Cross St, 2nd Stage, Naagarabhaavi, Bengaluru, Karnataka 560072	10/7/2018 to 6/8/2018	Shwetha M
2	Customer Relationship Management	4NGLE Software Consultancy Pvt.Ltd, #4, SUNRISE COMPLEX, 6TH BLOCK, 2nd Cross St, 2nd Stage, Naagarabhaavi, Bengaluru, Karnataka 560072	10/07/2018 to 06/08/2018	Rohith E C,
3	Customer Relationship Management	4NGLE Software Consultancy Pvt.Ltd, #4, SUNRISE COMPLEX, 6TH BLOCK, 2nd Cross St, 2nd Stage, Naagarabhaavi, Bengaluru, Karnataka 560072	10/07/2018 to 06/08/2018	Divya S,
4	Customer Relationship Management	4NGLE Software Consultancy Pvt.Ltd, #4, SUNRISE COMPLEX, 6TH BLOCK, 2nd Cross St, 2nd Stage, Naagarabhaavi, Bengaluru, Karnataka 560072	10/07/2018 to 06/08/2018	Akhila P K
5	Customer Relationship Management	4NGLE Software Consultancy Pvt.Ltd, #4, SUNRISE COMPLEX, 6TH BLOCK, 2nd Cross St, 2nd Stage, Naagarabhaavi, Bengaluru, Karnataka 560072	10/07/2018 to 06/08/2018	Ankita Shukla
6	Mini Scientific calculator	LIVEWIRE , ka.blr.basaveshwaranagar@livewireindia.com,080-65702005, Bangalore	09/07/2018 to 04/08/2018	Irfan pasha
7	Programming using Python	LIVEWIRE , ka.blr.basaveshwaranagar@livewireindia.com,080-65702005, Bangalore	09/07/2018 to 04/08/2018	Sathish P
8	Minesweeper Game	LIVEWIRE , ka.blr.basaveshwaranagar@livewireindia.com,080-65702005, Bangalore	09/07/2018 to 04/08/2018	Hari Kireeti B K
9	Event Queue	Parvam Consultancy .Tech, #117, Hesarghatta Main Rd, New Extension, Chikkabanavara, Bengaluru, Karnataka 560090	09/07/2018 to 04/08/2018	Nayana H V
10	Basic Elements of android application Development	Seamovation labs private limited, No.110, 1st Floor, AG's Layout, New BEL Main Road, Sanjaynagar Ward, Bengaluru Bangalore KA 560094	09/07/2018 to 09/08/2018	Vasuki E M
11	Web Development	InfiData Technolonologies, #1142, 1st Floor,16th B Cross, Sri Radha Building, opp.to Dr. Agarwal Eye Hospital, Yelahanka New Town, Bengaluru, Karnataka 560064	10/07/2018 to 10/08/2018	Raisa Kauser
12	Network Automation	Reliance Jio Infocomm Limited, Whitefield Road, Bangalore - 560048	09/07/2018 to 06/08/2018	Soundarya V R
13	Mini Scientific Calculator	LIVEWIRE , ka.blr.basaveshwaranagar@livewireindia.com,080-65702005, Bangalore	09/07/2018 to 06/08/2019	Kavya R
14	Programming using Python	LIVEWIRE , ka.blr.basaveshwaranagar@livewireindia.com,080-65702005, Bangalore	09/07/2018 to 04/08/2018	Nikhil B K
15	Online Test Management Tool	Bharat Electronics Limited Bangalore, OUTER RING ROAD NAGAVARA. City, BANGALORE. PIN, 560045	09/07/2018 to 07/08/2018	Ashwini Shridhar DE
16	Animated clock and hour Glass loader	Bharat Electronics Limited Bangalore, OUTER RING ROAD NAGAVARA. City, BANGALORE. PIN, 560045	11/07/2018 to 09/08/2018	Indu B
17	Customer Relationship Management Notice Model	Parvam Consultancy .Tech, #117, Hesarghatta Main Rd, New Extension, Chikkabanavara, Bengaluru, Karnataka 560090	07/01/2019 to 07/02/2019	Munshad Ali
18	Data Collector	Effone Technologies, 2/3, Dr Rajkumar Road, 59a, 4n Block, Rajaji Nagar, Rajaji Nagar, Dr Rajkumar Rd, Udayam Nagar, Rajajinagar, Bengaluru, Karnataka 560010	09/07/2018 to 03/08/2018	Shiva Selvi

19	Online Book Store	4NGLE Software Consultancy Pvt.Ltd, #4, SUNRISE COMPLEX, 6TH BLOCK, 2nd Cross St, 2nd Stage, Naagarabhaavi, Bengaluru, Karnataka 560072	10/07/2018 to 06/08/2018	Yojana Aryal
20	Animated Clock and hour Glass loader	Bharat Electronics Limited Bangalore, OUTER RING ROAD NAGAVARA. City, BANGALORE. PIN, 560045	11/07/2018 to 09/08/2018	Vibha Reddy K B
21	Movie Booking	LIVEWIRE , ka.blr.basaveshwaranagar@livewireindia.com,080-65702005, Bangalore	09/07/2018 to 4/8/2018	Prakash Rayamajhi
22	Event Management	LIVEWIRE , ka.blr.basaveshwaranagar@livewireindia.com,080-65702005, Bangalore	09/07/2018 to 04/08/2018	Amit Kumar
23	Gallery Application	Seamovation labs private limited, No.110, 1st Floor, AG's Layout, New BEL Main Road, Sanjaynagar Ward, Bengaluru Bangalore KA 560094	09/07/2018 to 09/08/2018	Bhimavva P
24	Calender aaplication	Seamovation labs private limited, No.110, 1st Floor, AG's Layout, New BEL Main Road, Sanjaynagar Ward, Bengaluru Bangalore KA 560094	09/07/2018 to 09/08/2018	Prerana D
25	Workflow automation similar to IFTTT	TATA Elxsi, ITPB Road, Whitefield Road, Bangalore, Karnataka, India - 560048	09/07/2018 to 06/08/2018	Hemalatha C
26	Car Sales System	LIVEWIRE , ka.blr.basaveshwaranagar@livewireindia.com,080-65702005, Bangalore	09/07/2018 to 04/08/2018	Rupesh Timalsina,
27	Car Sales System	LIVEWIRE , ka.blr.basaveshwaranagar@livewireindia.com,080-65702005, Bangalore	09/07/2018 to 04/08/2018	Biwas Subedi,
28	Car Sales System	LIVEWIRE , ka.blr.basaveshwaranagar@livewireindia.com,080-65702005, Bangalore	09/07/2018 to 04/08/2018	Raghav Kattel,
29	Car Sales System	LIVEWIRE , ka.blr.basaveshwaranagar@livewireindia.com,080-65702005, Bangalore	09/07/2018 to 04/08/2018	Archan Bhatta
30	Financial Calculator Android App	Seamovation labs private limited, No.110, 1st Floor, AG's Layout, New BEL Main Road, Sanjaynagar Ward, Bengaluru Bangalore KA 560094	09/07/2018 to 09/8/2018	Prathibha Mallappa Al
31	Programming using Python	LIVEWIRE , ka.blr.basaveshwaranagar@livewireindia.com,080-65702005, Bangalore	09/07/2018 to 09/8/2019	Varun Bharadwaj
32	Web Development	4NGLE Software Consultancy Pvt.Ltd, #4, SUNRISE COMPLEX, 6TH BLOCK, 2nd Cross St, 2nd Stage, Naagarabhaavi, Bengaluru, Karnataka 560072	10/07/2018 to 06/08/2018	Tanaya Patra,
33	Web Development	4NGLE Software Consultancy Pvt.Ltd, #4, SUNRISE COMPLEX, 6TH BLOCK, 2nd Cross St, 2nd Stage, Naagarabhaavi, Bengaluru, Karnataka 560072	10/07/2018 to 06/08/2018	smriti Ghimire
34	Adroid	LIVEWIRE , ka.blr.basaveshwaranagar@livewireindia.com,080-65702005, Bangalore	09/07/2018 to 04/08/2018	Drawpada Sharma
35	Mini Scientific Calculator	LIVEWIRE , ka.blr.basaveshwaranagar@livewireindia.com,080-65702005, Bangalore	09/07/2018 to 4/8/2018	Vinutha H
36	Python	LIVEWIRE , ka.blr.basaveshwaranagar@livewireindia.com,080-65702005, Bangalore	09/07/2018 to 04/08/2018	Salim M Gumbo
37	Animated Clock and Hourglass Loader	Bharat Electronics Limited Bangalore, OUTER RING ROAD NAGAVARA. City, BANGALORE. PIN, 560045	11/07/2018 to 09/08/2018	V Joel
38	Snake game using Tkinter	LIVEWIRE , ka.blr.basaveshwaranagar@livewireindia.com,080-65702005, Bangalore	09/07/2018 to 04/08/2018	Nagaraj T
39	SVG Animation	Bharat Electronics Limited Bangalore, OUTER RING ROAD NAGAVARA. City, BANGALORE. PIN, 560045	11/07/2018 to 09/08/2018	Sowmya M.V
40	Random password generator	LIVEWIRE , ka.blr.basaveshwaranagar@livewireindia.com,080-65702005, Bangalore	09/07/2018 to 04/08/2018	Gayathri H.D

41	Event Queue	Parvam Consultancy .Tech, #117, Hesarghatta Main Rd, New Extension, Chikkabanavara, Bengaluru, Karnataka 560090	09/07/2018 to 04/08/2018	Mary Ropini
42	Customer Relationship Management	4NGLE Software Consultancy Pvt.Ltd, #4, SUNRISE COMPLEX, 6TH BLOCK, 2nd Cross St, 2nd Stage, Naagarabhaavi, Bengaluru, Karnataka 560072	10/07/2018 to 06/08/2018	Rahul M
43	Customer Relationship Management	Parvam Consultancy .Tech, #117, Hesarghatta Main Rd, New Extension, Chikkabanavara, Bengaluru, Karnataka 560090	07/01/2019 to 07/02/2019	Krishna RajBanshi
44	Customer Relationship Management	Parvam Consultancy .Tech, #117, Hesarghatta Main Rd, New Extension, Chikkabanavara, Bengaluru, Karnataka 560090	07/01/2019 to 07/02/2019	Rajat Gangwani
45	Minesweeper game	LIVEWIRE , ka.blr.basaveshwaranagar@livewireindia.com,080-65702005, Bangalore	09/07/2018 to 04/08/2018	Bindu S
46	Online shoe marketing	4NGLE Software Consultancy Pvt.Ltd, #4, SUNRISE COMPLEX, 6TH BLOCK, 2nd Cross St, 2nd Stage, Naagarabhaavi, Bengaluru, Karnataka 560072	10/07/2018 to 06/08/2018	Richa Kumari
47	Programming using python	LIVEWIRE , ka.blr.basaveshwaranagar@livewireindia.com,080-65702005, Bangalore	09/07/2018 to 04/08/2018	Shreekanth
48	Kloh event management application	Kloh internet pvt ltd, L-165, Sri Gayathri complex, Sector 6, HSR Layout, Bengaluru, Karnataka 560102	01/07/2018 to 31/08/2018	Milan shrestha
49	Customer Relationship Management	Parvam Consultancy .Tech, #117, Hesarghatta Main Rd, New Extension, Chikkabanavara, Bengaluru, Karnataka 560090	07/01/2019 to 07/02/2019	Julius Daimary
50	Timer	LIVEWIRE , ka.blr.basaveshwaranagar@livewireindia.com,080-65702005, Bangalore	09/07/2018 to 04/08/2018	Srikanth B.R
51	Minesweeper game	LIVEWIRE , ka.blr.basaveshwaranagar@livewireindia.com,080-65702005, Bangalore	09/07/2018 to 04/08/2018	Monika P.V
52	Dine-N-Wine	InfiData Technolonologies, #1142, 1st Floor,16th B Cross, Sri Radha Building, opp.to Dr. Agarwal Eye Hospital, Yelahanka New Town, Bengaluru, Karnataka 560064	10/07/2018 to 10/08/2018	Maheen Sedra
53	Random password generator	LIVEWIRE , ka.blr.basaveshwaranagar@livewireindia.com,080-65702005, Bangalore	09/07/2018 to 04/08/2018	Baba Bharat
54	Snake game using Tkinter	LIVEWIRE , ka.blr.basaveshwaranagar@livewireindia.com,080-65702005, Bangalore	09/07/2018 to 04/08/2018	Dipendra mahato
55	Event Queue	Parvam Consultancy .Tech, #117, Hesarghatta Main Rd, New Extension, Chikkabanavara, Bengaluru, Karnataka 560090	09/07/2018 to 04/08/2018	Chandana M.S
56	Coswafe-Social Media Network For Photographers	Wreken Interactive, C – 234 sector 10, Noida 201301	26/03/2019 To 26/03/2019	Ankit Yadav
57	Gateway-Vehicle Accident Detection	Nano Robotics Embedded Technologies, 27/1 14th main gokula 1st stage mattikere, Bangalore 560054	06/06/2019 To 06/08/2019	Arjun N
58	Color Detection For Blind People	Nano Robotics Embedded Technologies, 27/1 14th main gokula 1st stage mattikere, Bangalore 560054	05/07/2019 To 05/08/2019	Pooja R R
59	Color Detection For Blind People	Nano Robotics Embedded Technologies, 27/1 14th main gokula 1st stage mattikere, Bangalore 560054	05/07/2019 To 05/08/2019	Lakshmishri L
60	Color Detection For Blind People	Nano Robotics Embedded Technologies, 27/1 14th main gokula 1st stage mattikere, Bangalore 560054	05/07/2019 To 05/08/2019	Vaanyashree P M
61	Color Detection For Blind People	Nano Robotics Embedded Technologies, 27/1 14th main gokula 1st stage mattikere, Bangalore 560054	05/07/2019 To 05/08/2019	Yashaswini K
62	Online Tech Forum	Parvam Consul Tech pvt limited, #117 New extension, Chikkabanavara Bangalore 560090	05/07/2019 To 05/08/2019	Kannan S
63	Gateway-Weather Monitoring System	Nano Robotics Embedded Technologies, 27/1 14th main gokula 1st stage mattikere, Bangalore 560054	6/07/2019 To 06/08/2019	Yashas Chandra S

64	Gateway-Weather Monitoring System	Nano Robotics Embedded Technologies, 27/1 14th main gokula 1st stage mattikere, Bangalore 560054	6/07/2019 To 06/08/2019	Nithesh Kumar
65	Gateway-Weather Monitoring System	Nano Robotics Embedded Technologies, 27/1 14th main gokula 1st stage mattikere, Bangalore 560054	06/07/2019 To 06/08/2019	Akshay N Mohan
66	Gateway-Vehicle Accident Detection	Nano Robotics Embedded Technologies, 27/1 14th main gokula 1st stage mattikere, Bangalore 560054	06/07/2019 To 06/08/2019	Srinivas G
67	Smart Warehouse Monitoring	Nano Robotics Embedded Technologies, 27/1 14th main gokula 1st stage mattikere, Bangalore 560054	6/07/2019 To 06/08/2019	Supriya P
68	Smart Warehouse Monitoring	Nano Robotics Embedded Technologies, 27/1 14th main gokula 1st stage mattikere, Bangalore 560054	06/07/2019 To 06/08/2019	Varsha S
69	Smart Vehicle To Vehicle Communication	Nano Robotics Embedded Technologies, 27/1 14th main gokula 1st stage mattikere, Bangalore 560054	6/07/2019 To 06/08/2019	Asha L
70	Self Driving Robot In A Remote Location	Nano Robotics Embedded Technologies, 27/1 14th main gokula 1st stage mattikere, Bangalore 560054	06-07-2019 To 06/08/2019	Kumari Priya
71	Smart Vehicle To Vehicle Communication	Nano Robotics Embedded Technologies, 27/1 14th main gokula 1st stage mattikere, Bangalore 560054	06/07/2019 To 06/08/2019	Vaishnavi N
72	Smart Vehicle To Vehicle Communication	Nano Robotics Embedded Technologies, 27/1 14th main gokula 1st stage mattikere, Bangalore 560054	06/07/2019 To 06/08/2019	Aakash Kumar Singh
73	Vehicle Accident Detection Using Iot	Nano Robotics Embedded Technologies, 27/1 14th main gokula 1st stage mattikere, Bangalore 560054	06/07/2019 To 06/08/2019	Sathya Murthy M
74	Supermarket stock monitoring system	Infidata Technologies, #2341, 2nd & 3rd floor, 16th B Cross, yelahanka new town, Bangalore 560064	06/07/2019 To 05/08/2019	Nishath R Dalayat
75	Stock Market Prediction Using Lstm Neural Network	Inventeron Technologies and business solutions, 14/1 ground floor, near GT world mall, magadi main road Bangalore 23	08/072019 To 08/07/2019	Prathiba I Bilagi
76	Loan Status Prediction	Karunadu Institute, #17 ATK complex, 4th floor, Acharya college main road, Chikkabanavara Bangalore, 560090	08/07/2019 To 08/07/2019	Pritika Adhikari
77	Fantasy Game App	Go Super11 Sports Pvt. Ltd, #3 2nd floor 1st main, 1st cross,Huralichikkanahalli, Bangalore 560090	08/07/2019 To 08/08/2019	Rakshit Koul
78	Home Security System	Technofly Solutions, Vijayanagar, Bangalore- 40	08/07/2019 To 08/08/2019	Sahana T
79	Sentiment Analysis Using Nltk	Cybrain Software Solutions Pvt Ltd, Site no 1247, 3rd block, BEL Layout, vidyaranyapura Bangalore-7	08/07/2019 To 08/08/2019	Sona Sara Thomas
80	Restaurant Management System	Technofly Solutions, Vijayanagar, Bangalore- 40	08/07/2019 To 08/08/2019	Arpitha M R
81	Stress Detection System	Technofly Solutions, Vijayanagar, Bangalore- 40	08/07/2019 To 08/08/2019	Bindushree P M
82	Prediction Of Car Price	Karunadu Institute, #17 ATK complex, 4th floor, Acharya college main road, Chikkabanavara Bangalore, 560090	08/07/2019 To 08/08/2019	Birbal Subba
83	Sentiment Analysis Using Nltk	Cybrain Software Solutions Pvt Ltd, Site no 1247, 3rd block, BEL Layout, vidyaranyapura Bangalore-7	08/07/2019 To 08/08/2019	Contractor Asraar A
84	Sentiment Analysis Using Nltk	Cybrain Software Solutions Pvt Ltd, Site no 1247, 3rd block, BEL Layout, vidyaranyapura Bangalore-7	08/07/2019 To 08/08/2019	George James
85	Stress Detection System	Technofly Solutions, Vijayanagar, Bangalore- 40	08/07/2019 To 08/08/2019	Hemalatha R
86	Sentiment Analysis Using Nltk	Cybrain Software Solutions Pvt Ltd, Site no 1247, 3rd block, BEL Layout, vidyaranyapura Bangalore-7	08/07/2019 To 08/08/2019	Imran Khan

87	Metro Cash And Carry	Technofly Solutions, Vijayanagar, Bangalore- 40	08/07/2019 To 08-08-2019	Lavanya R
88	Loan Status Prediction	Karunadu Institute, #17 ATK complex, 4th floor, Acharya college main road, Chikkabanavara Bangalore, 560090	08/07/2019 To 08/08/2019	Likitha Y
89	Sentiment Analysis Using Nltk	Cybrain Software Solutions Pvt Ltd, Site no 1247, 3rd block, BEL Layout, vidyaranyapura Bangalore-7	08/07/2019 To 08/08/2019	Rajeshwari C
90	Sentiment Analysis Using Nltk	Cybrain Software Solutions Pvt Ltd, Site no 1247, 3rd block, BEL Layout, vidyaranyapura Bangalore-7	08/07/2019 To 08/08/2019	Sayantani Sarkar
91	Prediction Of Car Price	Karunadu Institute, #17 ATK complex, 4th floor, Acharya college main road, Chikkabanavara Bangalore, 560090	08/07/2019 To 08/08/2019	Season Rijal
92	Prediction Of Iris Data Set	Karunadu Institute, #17 ATK complex, 4th floor, Acharya college main road, Chikkabanavara Bangalore, 560090	08/07/2019 To 08/08/2019	Umesh Kandel
93	Sentiment Analysis Using Nltk	Cybrain Software Solutions Pvt Ltd, Site no 1247, 3rd block, BEL Layout, vidyaranyapura Bangalore-7	08/07/2019 To 08/08/2019	Vishal Gupta
94	Sentiment Analysis Using Nltk	Cybrain Software Solutions Pvt Ltd, Site no 1247, 3rd block, BEL Layout, vidyaranyapura Bangalore-7	08/07/2019 To 08/08/2019	Tejashwini R
95	Iot In Embedded System	Technofly Solutions, Vijayanagar, Bangalore- 40	08/07/2019 To 08/08/2019	Karthik Dambralli
96	Home Automation Using Raspberry Pi	I-Quad Technologies, #12, 8th main, havanur extension,hesaraghatta main road Bangalore 73	08/07/2019 To 08/08/2019	Yashaswini R
97	Web Development	Parichaya Techsolutions, Bedarahalli, Bengaluru, Karnataka 560091	13/01/2020 To 14/02/2020	Ritu Raj
98	Web Development	Gyanmatrix Technologies Pvt.Limited, 3rd floor, sahukar's building #72 CMH road, indiranagar 1st stage, Bangalore 560038	22/07/2019 To 23/08/2019	Shreejit S Pillai
99	Sentimental Analysis	Cybrain Software Solutions Pvt Ltd, Site no 1247, 3rd block, BEL Layout, vidyaranyapura Bangalore-7	05/07/2019 To 02/08/2019	Amrit Sharma
100	Python with Mahine Learning	Karunadu Institute, #17 ATK complex, 4th floor, Acharya college main road, Chikkabanavara Bangalore, 560090	08/07/2019 To 08/08/2019	Pradip Gharti Magar

c) Impact Analysis of Industrial Training

Internships in the industries endow the students with the following benefits.

- Hands on experience provide better understanding of the basic concepts.
- Students learn the industrial standards, current trends and practices.
- Real environmental exposure enhances student's learning.
- Implementation and testing becomes easier.
- Helps in building inter personal skills and teamwork.
- Students can see live project site and they gain practical knowledge.
- The industry standards and workplace culture is exposed to students, and they also understand the importance of being responsible and meeting the deadlines.
- Communication skills of the students are improved.
- Students are inspired to work hard and get placed.

d) Student feedback on initiative

After each program we will take student feedback on the programs like Workshops, Seminars, Student Development Programs, Awareness Programs and industrial visits. Feedback is considered to do further improvement for the same. Parameters considered for the calculation of student feedback are shown in table 2.2.5 (iii).

Table 2.2.5 (iii): Parameters for students feedback

PARAMETERS	SCALES				
Did the Event Meet Your Expectations	5	4	3	2	1
The quality of instruction was good	5	4	3	2	1
Participation and interaction were encouraged	5	4	3	2	1
Adequate time was provided for questions and discussion	5	4	3	2	1
I really enjoyed this event	5	4	3	2	1
The Audio and Video facilities were clearly audible and visible	5	4	3	2	1
Materials distributed are useful	5	4	3	2	1
The programme was well paced with the allotted time	5	4	3	2	1
Overall event was excellent	5	4	3	2	1
Would you recommend this event to others	5	4	3	2	1

3 COURSE OUTCOMES AND PROGRAM OUTCOMES (120)   Total Marks 106.00

Define the Program specific outcomes

3.1 Establish the correlation between the courses and the Program Outcomes (POs) and Program Specific Outcomes (PSOs) (20)   Total Marks 20.00

:

PSO1	Apply the software practices, principals to design and analyse the complex computer based system.
PSO2	Design, implement and validate system software and application software to the various societal needs.

3.1.1 Course Outcomes(COs)(SAR should include course outcomes of one course from each semester of study, however, should be prepared for all courses and made available as evidence, if asked) (5)

Institute Marks : 5.00

Note : Number of Outcomes for a Course is expected to be around 6.

Course Name :		C2 02	Course Year :	2018-2019

Course Name	Statements
C2　02.1	Explain the operation of JFETs and MOSFETs , Operational Amplifier circuits and their application, Design of Counters, Registers and A/D & D/A converters
C2　02.2	Explain Combinational Logic, Simplification Techniques using Karnaugh Maps, Quine McClusky technique.
C2　02.3	Demonstrate Operation of Decoders, Encoders, Multiplexers, Adders and Subtractors, working of Latches, Flip-Flops, Designing Registers, Counters, A/D and D/A Converters
C2　02.4	Design of Counters, Registers and A/D & D/A converters

Course Name :		C2 15	Course Year :	2018-2019

Course Name	Statements
C2　15.1	Explain the object oriented concepts and Java
C2　15.2	Develop computer programs to solve real world problems in JAVA
C2　15.3	Develop simple GUI interfaces for a computer program to interact with users, and to understand the event-based GUI handling principles using Applets and swings.

Course Name :		C3 02	Course Year :	2019-2020

Course Name	Statements
C3　02.1	Explain principles of application layer protocols
C3　02.2	Recognize transport layer services and infer UDP and TCP protocols
C3　02.3	Classify routers, IP and Routing Algorithms in network layer
C3　02.4	Understand the Wireless and Mobile Networks covering IEEE 802.11 Standard
C3　02.5	Describe Multimedia Networking and Network Management

Course Name :		C3 13	Course Year :	2019-2020

Course Name	Statements
C3　13.1	Explain system software such as assemblers, loaders, linkers and macroprocessors
C3　13.2	Design and develop lexical analyzers, parsers and code generators
C3　13.3	Utilize lex and yacc tools for implementing different concepts of system software

Course Name :		C4 02	Course Year :	2020-2021

Course Name	Statements
C4　02.1	Demonstrate Parallel computing Concept.
C4　02.2	Develop and compare the parallel Architecture.
C4　02.3	Understand the concepts of parallel computing and its hardware technologies

Course Name :		C4 11	Course Year :	2020-2021

Course Name	Statements
C4　11.1	Interpret the impact and challenges posed by IoT networks leading to new architectural models.
C4　11.2	Compare and contrast the deployment of smart objects and the technologies to connect them to network.
C4　11.3	Appraise the role of IoT protocols for efficient network communication
C4　11.4	Elaborate the need for Data Analytics and Security in IoT.
C4　11.5	Illustrate different sensor technologies for sensing real world entities and identify the applications of IoT in Industry

3.1.2 CO-POmatrices of courses selected in 3.1.1(Six matrices to be mentioned; one per semester from 3rd to 8th semester) (5)　　　　　　Institute Marks : 5.00

1 . course name : C202

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C202.1	2	2	-	-	-	-	-	-	-	-	-	-
C202.2	2	2	3	-	-	-	-	-	-	-	-	-
C202.3	2	2	3	-	-	-	-	-	-	-	-	-
C202.4	2	2	3	-	-	-	-	-	-	-	-	-
Average	2.00	3.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

2 . course name : C215

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C215.1	3	2	2	-	2	-	-	-	2	-	-	2
C215.2	3	2	2	-	2	-	-	-	2	-	-	2
C215.3	3	2	2	-	2	-	-	-	2	-	-	2
Average	3.00	2.00	2.00	0.00	2.00	0.00	0.00	0.00	2.00	0.00	0.00	2.00

3 . course name : C302

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C302.1	3	3	-	-	-	-	-	-	-	-	-	-
C302.2	3	3	-	-	-	-	-	-	-	-	-	-
C302.3	3	2	2	-	-	-	-	-	-	-	-	-
C302.4	3	3	-	-	-	-	-	-	-	-	-	-
C302.5	3	-	2	-	-	-	-	-	-	-	-	-
Average	3.00	3.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

4 . course name : C313

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C313.1	3	2	1	-	-	-	-	-	-	-	-	-
C313.2	3	2	1	-	-	-	-	-	-	-	-	-
C313.3	3	2	2	-	-	-	-	-	-	-	-	-
Average	3.00	2.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5 . course name : C402

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C402.1	2	2	2	-	-	-	-	-	-	-	-	-
C402.2	3	2	2	-	-	-	-	-	-	-	-	-
C402.3	3	2	-	-	-	-	-	-	-	-	-	-
Average	2.00	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

6 . course name : C411

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C411.1	2	-	-	-	-	-	-	-	-	-	-	-
C411.2	-	-	2	-	-	-	-	-	-	-	-	-
C411.3	-	2	-	-	-	-	-	-	-	-	-	-
C411.4	-	-	-	2	-	-	-	-	-	-	-	-
C411.5	-	-	-	-	2	-	-	-	-	-	-	-
Average	2.00	2.00	2.00	2.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

1 . Course Name : C202

Course	PSO1	PSO2
C202.1	2 ⌄	- ⌄
C202.2	2 ⌄	- ⌄
C202.3	2 ⌄	- ⌄
C202.4	2 ⌄	- ⌄
Average	3.00	0.00

2 . Course Name : C215

Course	PSO1	PSO2
C215.1	3 ⌄	- ⌄
C215.2	3 ⌄	- ⌄
C215.3	3 ⌄	- ⌄
Average	3.00	0.00

3 . Course Name : C302

Course	PSO1	PSO2
C302.1	3 ⌄	- ⌄
C302.2	3 ⌄	- ⌄
C302.3	2 ⌄	- ⌄
C302.4	3 ⌄	- ⌄
C302.5	3 ⌄	- ⌄
Average	3.00	0.00

4 . Course Name : C313

Course	PSO1	PSO2
C313.1	2 ⌄	- ⌄
C313.2	2 ⌄	- ⌄
C313.3	2 ⌄	- ⌄
Average	2.00	0.00

5 . Course Name : C402

Course	PSO1	PSO2
C402.1	2 ⌄	- ⌄
C402.2	2 ⌄	- ⌄
C402.3	2 ⌄	- ⌄
Average	2.00	0.00

6 . Course Name : C411

Course	PSO1	PSO2
C411.1	- ⌄	- ⌄
C411.2	2 ⌄	- ⌄
C411.3	- ⌄	2 ⌄
C411.4	2 ⌄	- ⌄
C411.5	- ⌄	2 ⌄
Average	2.00	2.00

3.1.3 - A Program level Course-PO matrix of all courses INCLUDING first year courses (10)

Institute Marks : 10.00

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C101	3	3	3	2	2	PO6	PO7	PO8	3	1	PO11	PO12
C102	3	2	2	PO4	PO5	PO6	PO7	PO8	2	PO10	PO11	1

C103	3	3	3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C104	3	1	3	PO4	3	2	1	PO8	PO9	3	PO11	1
C105	3	3	2	1	PO5	PO6	PO7	PO8	PO9	2	2	3
C106	1	3	2	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C107	1	3	2	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C108	2	0	0	0	0	3	3	3	PO9	PO10	PO11	PO12
C111	3	3	3	3	3	PO6	PO7	PO8	1	3	PO11	3
C112	3	3	0	PO4	PO5	PO6	3	PO8	PO9	PO10	PO11	3
C113	3	3	3	1	3	PO6	PO7	PO8	3	1	PO11	1
C114	2	PO2	2	2	1	PO6	PO7	PO8	PO9	2	PO11	2
C115	3	2	2	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C116	3	3	3	1	3	PO6	PO7	PO8	3	1	PO11	1
C117	2	2	1	3	2	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C118	1	PO2	PO3	PO4	PO5	2	2	1	1	PO10	PO11	1
C201	3	3	2	2	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C202	2	2	3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C203	2	2	3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C204	2.5	3	2.5	2	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C205	2	2.5	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C206	3	3	3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C207	2	2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C208	2.5	2	3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C211	3	3	2	2	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C212	2	2	2	2	2	1	1	1	2	PO10	PO11	PO12
C213	2	2	3	3	PO5	PO6	PO7	PO8	PO9	PO10	PO11	2
C214	2	2.5	2.5	2	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C215	3	2	2	PO4	2	PO6	PO7	PO8	2	PO10	PO11	2
C216	2	2	2	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C217	2	2	3	3	PO5	PO6	PO7	PO8	PO9	PO10	PO11	2
C218	2	2.5	2.5	2	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C301	PO1	2	3	PO4	PO5	PO6	PO7	3	2	2	2	2
C302	3	3	2	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C303	2.5	3	3	PO4	2.5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C304	3	2.5	2.5	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C3051	3	2.5	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C3065	3	2.5	2.5	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C307	3	2	3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C308	3	2	3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C311	1.5	1.5	1.5	PO4	PO5	1	PO7	1	PO9	PO10	PO11	PO12
C312	3	2.5	2.5	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C313	3	2	1.3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C314	1.5	1	1.5	1	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C3151	3	2.5	2.5	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C3153	3	2.5	2.5	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C3164	3	3	2	2	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C317	3	2	1	PO4	1	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C318	3	2	2	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C401	PO1	1.5	PO3	2.4	PO5	PO6	PO7	2.4	PO9	PO10	PO11	PO12
C402	2.4	2	2	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C403	2	2	2	3	1.5	3	PO7	PO8	PO9	PO10	PO11	PO12
C4043	2	2	1	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C4054	PO1	2	3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12

C406	2	2	3	3	3	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C407	2	2	3	1	3	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C408	3	3	3	3	2	2	3	3	3	3	3	3
C411	2	2	2	2	2	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C412	PO1	2	2	PO4	2	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C4132	PO1	2	3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C4134	3	2.5	2.5	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C414	3	3	3	3	2	1	2	2	2	2	1	2
C415	3	3	3	3	2	2	2	3	3	3	3	3
C416	3	3	PO3	2	1	PO6	PO7	3	2	3	PO11	2

3.1.3 - B Program level Course-PSO matrix of all courses INCLUDING first year courses

Course	PSO1	PSO2
C101	PSO1	PSO2
C102	PSO1	PSO2
C103	PSO1	PSO2
C104	PSO1	PSO2
C105	PSO1	PSO2
C106	PSO1	PSO2
C107	PSO1	PSO2
C108	PSO1	PSO2
C111	PSO1	PSO2
C112	PSO1	PSO2
C113	PSO1	PSO2
C114	PSO1	PSO2
C115	PSO1	PSO2
C116	PSO1	PSO2
C117	2	3
C118	1	0
C201	PSO1	PSO2
C202	3	3
C203	3	0
C204	2.5	PSO2
C205	2	0
C206	2.6	PSO2
C207	3	2
C208	3	2.5
C211	2	1
C212	2	0
C213	2.5	PSO2
C214	3	0
C215	3	0
C216	3	3
C217	2.5	2
C218	3	2
C301	2	2
C302	3	0
C303	3	3
C304	2	2
C3051	2	2.5
C3065	2	0
C307	2	3
C308	2	3

C311	1.5	1
C312	2	0
C313	2	0
C314	1.5	1
C3151	2	1.5
C3153	2	1.5
C3164	2	1
C317	1	1
C318	2	2
C401	0	1.5
C402	2	0
C403	2	3
C4043	2	2
C4054	3	0
C406	2	3
C407	2	3
C408	2	1
C411	2	2
C412	2	2
C4132	3	3
C4134	3	3
C414	1	2
C415	2	1
C416	2	1

3.2 Attainment of Course Outcomes (50)

3.2.1 Describe the assessment processes used to gather the data upon which the evaluation of Course Outcome is based (10)

Total Marks 38.00

Institute Marks : 8.00

A. Assesment processes for evaluation of Course outcomes.

The below figure 3.2.1(a) shows the assesment process for evaluation of course outcomes
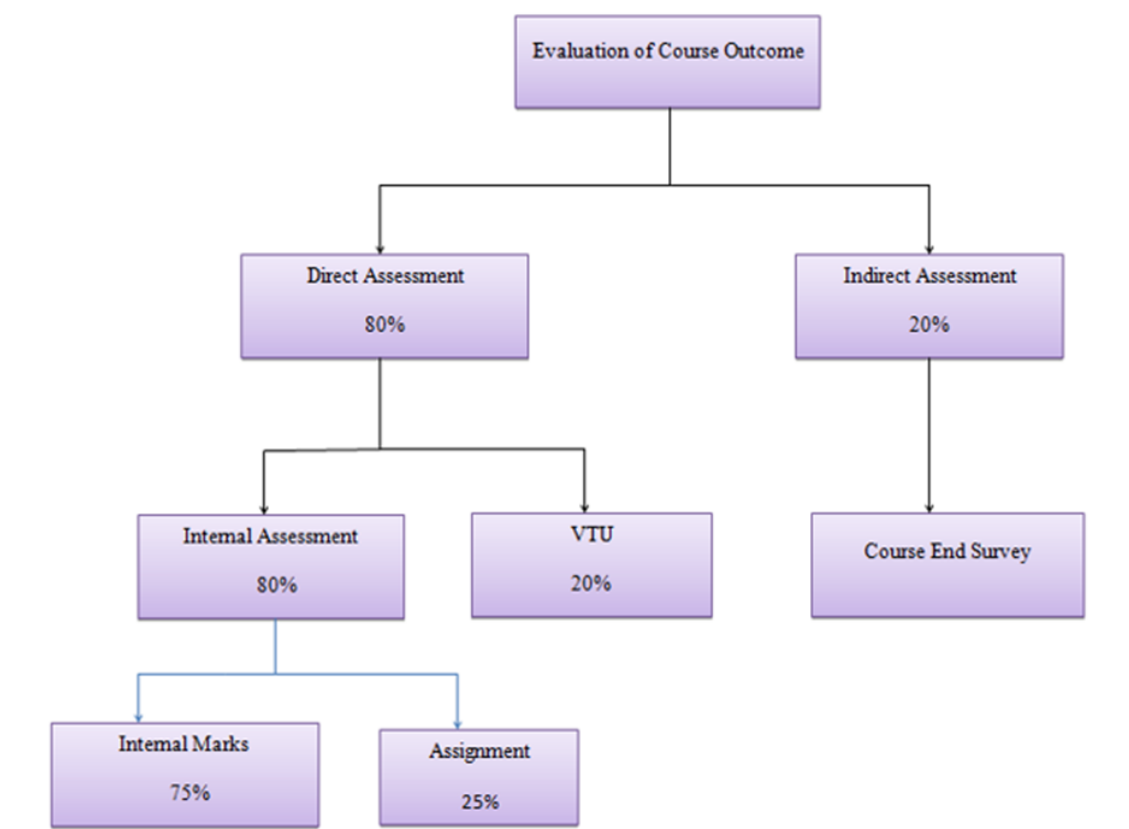
Figure 3.2.1(a) Assement process for evaluation of course outcomes

B.   The quality /relevance of assessment processes and tools used

- Evaluation of course outcome is done based on Direct Assessment and Indirect Assessment.
- For obtaining course outcomes we consider 80%of Direct Assessment and 20% of Indirect Assessment.
- Direct assessment is done by considering 80% of the total internal assessment and 20% of university result., the computation of total Internal Assessment is calculated by taking 75% internal marks scored and 25% of marks scored in assignments.
- Indirect Assessment is computed through the course-end survey by the faculty handling the course

3.2.2 Record the attainment of Course Outcome of all courses with respect to set attainment levels (40)   Institute Marks : 30.00

The table 3.2.2(i) shows the attainment of Course Outcome of all courses with set attainment levels.

Table 3.2.2(i) Attainment of Course Outcome of all courses with set attainment levels

SL. No	Subject Name	Subject code	Target Set	CO ATTAINED					
				CO1	CO2	CO3	CO4	C05	C06
	2nd Year								
1.	Engineering Mathematics – III ->C201	15MAT31	2.5	2.2	2.5	1.8	2.2	1.5	1.2
2.	Analog and Digital Electronics-> C202	15CS32	2.0	1.7	1.9	2.4			
3.	Data Structures and Applications ->C203	15CS33	1.5	2.8	2.3	2.4	2.8		
4.	Computer Organization ->C204	15CS34	2.3	2.4	2.93	2.8	2.8		
5.	Unix and Shell Programming-> C205	15CS35	2.4	1.7	2.4	2.7	1.97		
6.	Discrete Mathematical Structures ->C206	15CS36	2.0	1.8	1.7	2	1.5	2.4	
7.	Analog and Digital Electronics Laboratory ->C207	15CSL37	2.8	3	3	2.5	1.5	1	
8.	Data Structures Laboratory ->C208	15CSL38	2.5	3	3	2	2	1	

No.	Course	Code							
9.	Engineering Mathematics – IV ->C211	15MAT41	2.5	2.6	2.3	3	2.4	2.5	
10.	Software Engineering -> C212	15CS 42	2.4	1.8	2	2.2	2.6	2.7	
11.	Design and Analysis of Algorithms ->C213	15CS43	2.6	2.3	2.4	2			
12.	Microprocessors and Microcontrollers ->C214	15CS44	1.0	1.1	2.5	2.5	2.76		
13.	Object Oriented Concepts-> C215	15CS45	2.5	2.5	2.3	2.8			
14.	Data Communication -> C216	15CS46	2.0	2.4	2.2	1.5	1.7	1.9	
15.	Design and Analysis of Algorithm Laboratory ->C217	15CSL47	2.8	3	3	2.5	2		
16.	Microprocessors Laboratory ->C218	15CSL48	2.6	3	2.5	2	1		
3rd Year									
17.	Management and Entrepreneurship for IT Industry-> C301	15CS51	2.8	2.6	2.4	2			
18.	Computer Networks ->C302	15CS52	2.6	2	2.3	1.7	1.2	2	
19.	Database Management System ->C303	15CS53	2.6	2.7	2.9	2.4	2		
20.	Automata theory and Computability-> C304	15CS54	2.0	2.1	2.4	2.1	2.4	0.5	
21.	Object Oriented Modelling and Design ->C3051	15CS551	2.8	1.9	2.2	2			
22.	Cloud Computing ->C3065	15CS565	2.6	1.2	2.2	2.4	2	1.8	
23.	Computer Network Laboratory ->C307	15CSL57	2.8	3	2.5	1.5			
24.	DBMS Laboratory with mini project ->C308	15CSL58	2.8	3	2	1			
25.	Cryptography, Network Security and Cyber Law ->C311	15CS61	2.8	2.6	2.7	2.7			
26.	Computer Graphics and Visualization ->C312	15CS62	2.5	1.2	2.4	2.7	1.9		
27.	System Software and Compiler Design ->C313	15CS63	2.8	2.5	2.5	2.9			
28.	Operating Systems ->C314	15CS64	2.8	2.5	2.1	2.0	2		
29.	Data Mining and Data Warehousing ->C3151	15CS651	2.6	2	3	3			
30.	Operations research ->C3153	15CS653	2.8	3	3				
31.	Python Application Programming->C3164	15CS664	2.5	1.7	2.9	2.3	2.64	2.6	2.3
32.	System Software and Operating System Laboratory ->C317	15CSL67	2.8	3	2				
33.	Computer Graphics Laboratory with mini project ->C318	15CSL68	2.8	3	2	1			
4th Year									
34.	Web Technology and its applications ->C401	15CS71	2.8	2.9	2.4	2.9	2.9	2.9	
35.	Advanced Computer Architectures->C402	15CS72	1.5	2.3	2	3	2.7	2.9	
36.	Machine Learning ->C403	15CS73	2.6	3	2	3	3	2.7	
37.	Information and Network Security->C4043	15CS743	2.8	2.5	2.8	3	2.85	2.3	
38.	Storage Area Networks->C4054	15CS754	2.8	2.4	2.9	2	1.84		

39.	Machine Learning Laboratory-> C406	15CSL76	2.8	3	2.5	2	1		
40.	Web Technology Laboratory with mini project->C407	15CSL77	2.8	3	2	1			
41.	ProjectPhase1+Seminar ->C408	15CSP78	3.0	3	3	3			
42.	Internet of Things and Applications ->C411	15CS81	2.8	1.7	2.4	2.2	1.9	2.6	
43.	Big Data Analytics ->C412	15CS82	2.8	3	2.8	3	1.7	1.5	
44.	System Modelling and Simulation -> C4134	15CS834	3.0	1.3	2.4	2.3	1.80		
45.	Model Interface Design ->4132	15CS832	3.0	1.6	2.2	2.7	2.4		
46.	Internship/Professional Practice -> C4184	15CS84	3.0	3	3	3			
47.	Project work phase II ->C415	15CSP85	3.0	3	3	3			
48.	Seminar ->416	15CSS86	2.5	2	2				

3.3 Attainment of Program Outcomes and Program Specific Outcomes (50)   Total Marks 48.00

3.3.1 Describe the assessment tools and processes used for measuring the attainment of each of the Program Outcomes and Program Specific Outcomes (10)   Institute Marks : 8.00

A. List of assessment tools and processes

The list of assessment tools for both direct and indirect methods is given in below table 3.3.1(i).

Table 3.3.1(i): Assessment tools for both direct and indirect methods

Assessment tool type	Assessment tool title	Description
Direct Attainment Tools	**Internal Assessments, Assignments**	Internal Assessment and Assignments are conducted during every semester towards final CIE marks. These tests and assignments will prepare the students for the Semester End Examination.
	Internal Laboratory Test	During the end of the semester, laboratory test conduction and evaluation is done. These tests will enhance the confidence of students to face External lab examination.
	Mini Projects, Internship, Projects	Evaluation is done in phases by a committee (HOD, Project Coordinator, Project Guide).
	Semester End Examination	Both theory and practical/project examination are conducted as per the guidelines provided by the University.
Indirect Attainment Tools	**Exit Survey**	Feedback for the betterment of the department
	Alumni Survey	Feedback for the improvement of infrastructure, library, placement activities, industry-academic interaction
	Employer Survey	Expectations and the requirements to bridge the industry-academia gap.

B. The quality/relevance of assessment tools/processes used

Course outcomes are assessed through Continuous Internal Evaluation (CIE) and Semester End Examination (SEE). The analysis is done to find the level of attainments of each course COs. The attainment of POs and PSOs are being calculated based on the COs attainment. For indirect assessments, survey questionnaire is circulated to students, alumni and employer. The surveys are assessed and evaluated to determine the strength of attainment level of POs/ PSOs. Survey results from graduates, alumni, and employer are consolidated and the final PO values are calculated through 3-point scale (,Strong, Moderate,Slightly). Overall attainments of POs are calculated by taking 80% of direct attainment and 20% of indirect attainment. If the POs and PSOs attainment value is below the target, an essential remedial action has been taken.

3.3.2 Provide results of evaluation of PO&PSO (40)   Institute Marks : 40.00

PO Attainment

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C101	3	3	3	3	3	PO6	PO7	PO8	PO9	PO10	PO11	3
C102	3	3	3	3	PO5	PO6	PO7	PO8	3	PO10	PO11	2
C103	3	3	3	2	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C104	3	3	3	0	3	2	2	PO8	PO9	PO10	PO11	PO12
C105	3	3	3	3	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C106	2	1	2	1	PO5	1	1	PO8	1	1	PO11	PO12
C107	3	2	2	2	1	1	1	1	2	2	PO11	PO12
C108	PO1	PO2	PO3	PO4	PO5	3	3	3	3	3	PO11	PO12
C111	3	3	3	3	3	PO6	PO7	PO8	PO9	PO10	PO11	3

C112	3	3	3	3	PO5	PO6	PO7	PO8	3	PO10	PO11	2
C113	3	3	3	3	3	PO6	PO7	PO8	3	PO10	PO11	3
C114	3	3	3	3	3	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C115	3	3	3	3	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C116	3	3	3	PO4	1	PO6	PO7	PO8	PO9	2	PO11	2
C117	3	2	2	2	1	1	1	1	2	2	PO11	PO12
C118	PO1	PO2	PO3	PO4	PO5	3	3	3	0	2	PO11	PO12
C201	3	3	3	3	3	3	PO7	PO8	PO9	PO10	PO11	3
C202	3	3	3	3	3	PO6	PO7	PO8	PO9	PO10	PO11	2
C203	3	3	3	3	3	2	PO7	2	2	PO10	PO11	3
C204	3	3	2	2	PO5	2	PO7	2	PO9	PO10	PO11	PO12
C205	3	3	3	PO4	PO5	2	2	1	PO9	PO10	PO11	3
C206	3	3	3	3	1	PO6	PO7	PO8	PO9	PO10	PO11	2
C207	2	2	2	2	2	PO6	PO7	PO8	PO9	2	PO11	PO12
C208	3	3	3	PO4	1	PO6	PO7	PO8	2	PO10	PO11	1
C211	3	3	3	3	3	3	PO7	PO8	PO9	PO10	PO11	3
C212	3	3	3	2	PO5	2	1	3	PO9	2	3	3
C213	3	3	3	3	3	1	PO7	PO8	3	PO10	PO11	3
C214	3	3	3	3	3	1	PO7	PO8	PO9	2	PO11	2
C215	3	3	3	3	3	2	PO7	1	2	2	2	3
C216	3	3	3	2	PO5	2	1	1	PO9	3	1	3
C217	3	3	3	2	3	PO6	PO7	PO8	PO9	1	PO11	2
C218	2	2	2	1	PO5	1	PO7	PO8	PO9	1	PO11	1
C301	1	2	PO3	PO4	PO5	2	2	2	PO9	2	3	2
C302	3	3	3	3	3	PO6	PO7	PO8	3	2	PO11	3
C303	3	3	3	3	3	PO6	PO7	PO8	3	3	3	3
C304	3	3	3	2	1	PO6	PO7	PO8	PO9	PO10	PO11	2
C3051	3	2	2	PO4	2	1	1	1	PO9	1	2	2
C3065	3	2	2	1	2	PO6	PO7	PO8	PO9	2	PO11	2
C307	3	3	2	PO4	3	PO6	PO7	PO8	1	1	PO11	1
C308	3	3	3	3	3	PO6	PO7	PO8	3	3	1	2
C311	3	3	3	3	3	2	2	2	PO9	PO10	PO11	2
C312	3	3	3	2	2	1	1	PO8	3	3	3	2
C313	3	3	2	2	2	PO6	PO7	PO8	PO9	2	PO11	1
C314	3	3	3	3	2	1	1	PO8	PO9	PO10	PO11	2
C3151	3	3	3	3	3	3	3	PO8	PO9	PO10	PO11	2
C3153	3	3	3	3	2	1	PO7	PO8	PO9	PO10	2	1
C3164	3	3	3	2	2	2	PO7	PO8	PO9	PO10	PO11	3
C317	3	1	1	1	1	PO6	PO7	PO8	1	1	PO11	1
C318	3	3	3	PO4	3	PO6	PO7	3	3	3	1	1
C401	3	3	3	2	3	3	1	PO8	3	3	3	3
C402	3	3	3	3	1	2	1	PO8	PO9	PO10	PO11	1
C403	3	3	3	3	3	3	1	PO8	3	3	3	3
C4043	2	2	1	1	1	PO6	PO7	PO8	PO9	PO10	PO11	1
C4054	2	2	2	2	1	1	1	PO8	PO9	PO10	PO11	2
C406	3	3	3	PO4	3	PO6	PO7	PO8	PO9	PO10	PO11	1
C407	3	3	3	PO4	3	PO6	PO7	PO8	2	3	1	1
C408	3	3	3	3	3	2	2	2	3	3	3	3
C411	3	3	3	3	2	2	2	PO8	3	PO10	PO11	3
C412	3	3	3	3	3	3	1	PO8	PO9	PO10	PO11	3
C4132	3	3	3	1	1	1	PO7	PO8	PO9	PO10	PO11	1
C4134	2	3	3	2	2	PO6	PO7	PO8	PO9	PO10	PO11	1
C414	3	3	3	3	3	PO6	PO7	PO8	2	3	PO11	1
C415	3	3	3	3	3	2	2	2	3	3	3	3
C416	3	3	1	2	1	PO6	PO7	3	2	3	PO11	2

PO Attainment Level

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO Attainment	2.35	2.29	2.23	2.03	1.95	1.60	1.37	1.66	2.03	1.85	1.89	1.78
Direct Attainment	2.87	2.79	2.72	2.46	2.32	1.88	1.57	1.94	2.46	2.23	2.27	2.12
InDirect Attainment	0.25	0.30	0.27	0.31	0.45	0.50	0.55	0.52	0.32	0.34	0.38	0.4

PSO Attainment

Course	PSO1	PSO2
C101	PSO1	PSO2
C102	PSO1	PSO2
C103	PSO1	PSO2
C104	PSO1	PSO2
C105	PSO1	PSO2
C106	PSO1	PSO2
C107	PSO1	PSO2
C108	PSO1	PSO2
C111	PSO1	PSO2
C112	PSO1	PSO2
C113	3	PSO2
C114	PSO1	PSO2
C115	PSO1	PSO2
C116	3	3
C117	PSO1	PSO2
C118	PSO1	PSO2
C201	PSO1	PSO2
C202	2	PSO2
C203	3	3
C204	2	1
C205	2	1
C206	1	PSO2
C207	1	1
C208	3	1
C211	PSO1	PSO2
C212	3	1
C213	3	2
C214	2	1
C215	3	2
C216	2	2
C217	3	2
C218	1	1
C301	2	PSO2
C302	3	3
C303	3	3
C304	2	2
C3051	3	2
C3065	3	2
C307	2	1
C308	3	2
C311	2	2
C312	2	2
C313	2	2
C314	3	2
C3151	3	2
C3153	1	0
C3164	3	3

C317	2	1
C318	3	2
C401	3	3
C402	2	2
C403	3	3
C4043	2	2
C4054	2	1
C406	3	2
C407	3	2
C408	3	1
C411	3	2
C412	3	3
C4132	2	1
C4134	2	1
C414	3	1
C415	3	1
C416	3	1

PSO Attainment Level

Course	PSO1	PSO2
CO Attainment	2.05	1.49
Direct Attainment	2.48	1.81
InDirect Attainment	0.32	0.22

4 STUDENTS' PERFORMANCE (150)   Total Marks 97.02

:

Table 4.1

Item (Information to be provided cumulatively for all the shifts with explicit headings, wherever applicable)	2020-21 (CAY)	2019-20 (CAYm1)	2018-19(CAYm2)	2017-18(CAYm3)	2016-17(CAYm4)	2015-16 (CAYm5)	2014-15 (CAYm6)
Sanctioned intake of the program(N)	60	60	60	60	60	60	60
Total number of students admitted in first year minus number of students migrated to other programs/ institutions plus No. of students migrated to this program (N1)	60	60	60	53	53	60	36
Number of students admitted in 2nd year in the same batch via lateral entry (N2)	0	5	7	2	3	5	5
Separate division students, If applicable (N3)	0	0	0	0	0	0	0
Total number of students admitted in the programme(N1 + N2 + N3)	60	65	67	55	56	65	41

Table 4.2

Year of entry	Total No of students admitted in the program (N1 + N2 + N3)	Number of students who have successfully graduated without backlogs in any semester/ year of study (Without Backlog means no compartment or failures in any semester/ year of study)			
		I year	II year	III year	IV year
2020-21 (CAY)	63	0	0	0	0
2019-20 (CAYm1)	65	19	0	0	0
2018-19 (CAYm2)	69	21	20	0	0
2017-18 (CAYm3)	57	23	22	16	0
2016-17 (LYG)	56	15	10	10	9
2015-16 (LYGm1)	68	15	14	12	12
2014-15 (LYGm2)	41	3	2	2	2

Table 4.3

Year of entry	Total No of students admitted in the program (N1 + N2 + N3)	Number of students who have successfully graduated in stipulated period of study) [Total of with Backlog + without Backlog]			
		I year	II year	III year	IV year
2020-21 (CAY)	63	0	0	0	0
2019-20 (CAYm1)	65	50	0	0	0
2018-19 (CAYm2)	69	41	48	0	0
2017-18 (CAYm3)	57	41	41	39	0
2016-17 (LYG)	56	34	34	33	33
2015-16 (LYGm1)	68	48	50	50	50
2014-15 (LYGm2)	41	29	29	29	29

4.1 Enrolment Ratio (20)   Total Marks 20.00

                                                                                          Institute Marks : 20.00

	N (From Table 4.1)	N1 (From Table 4.1)	Enrollment Ratio [(N1/N)*100]
2020-21 (CAY)	60	63	105.00
2019-20 (CAYm1)	60	60	100.00
2018-19 (CAYm2)	60	62	103.33

Average [(ER1 + ER2 + ER3) / 3] :   102.78

Assessment :   20.00

4.2 Success Rate in the stipulated period of the program (40)   Total Marks 13.45

4.2.1 Success rate without backlogs in any semester / year of study (25)   Institute Marks : 3.25

Item	Latest Year of Graduation, LYG (2016-17)	Latest Year of Graduation minus 1, LYGm1 (2015-16)	Latest Year of Graduation minus 2 LYGm2 (2014-15)
X Number of students admitted in the corresponding First year + admitted in 2nd year via lateral entry and seperated division, if applicable	56.00	68.00	41.00
Y Number of students who have graduated without backlogs in the stipulated period	9.00	12.00	2.00
Success Index [SI = Y / X]	0.16	0.18	0.05

Average SI [(SI1 + SI2 + SI3) / 3] : 0.13

Assessment [25 * Average SI] : 3.25

4.2.2 Sucess rate in stipulated period (15)   Institute Marks : 10.20

Item	Latest Year of Graduation, LYG (2016-17)	Latest Year of Graduation minus 1, LYGm1 (2015-16)	Latest Year of Graduation minus 2 LYGm2 (2014-15)
X Number of students admitted in the corresponding First year + admitted in 2nd year via lateral entry and seperated division, if applicable	56.00	68.00	41.00
Y Number of students who have graduated in the stipulated period	33.00	50.00	29.00
Success Index [SI = Y / X]	0.59	0.74	0.71

Average SI[(SI1 + SI2 + SI3) / 3]: 0.68

Assessment [15 * Average SI] : 10.20

Note : If 100% students clear without any backlog then also total marks scored will be 40 as both 4.2.1 & 4.2.2 will be applicable simultaneously.

4.3 Academic Performance in Third Year (15)   Total Marks 9.26

                                                                                 Institute Marks : 9.26

Academic Performance	CAYm3 (2017-18)	LYG (2016-17)	LYGm1 (2015-16)
Mean of CGPA or mean percentage of all successful students(X)	7.22	6.13	5.69
Total number of successful students(Y)	39.00	33.00	50.00
Totalnumber of students appeared in the examination(Z)	41.00	34.00	50.00
API [X*(Y/Z)]:	6.87	5.95	5.69

Average API [(AP1 + AP2 + AP3)/3] : 6.17

Assessment [1.5 * AverageAPI] : 9.26

4.4 Academic Performance in Second Year (15)   Total Marks 8.78

                                                                                 Institute Marks : 8.78

Academic Performance	CAYm2 (2018-19)	CAYm3 (2017-18)	LYG (2016-17)
Mean of CGPA or mean percentage of all successful students(X)	6.72	6.13	5.45
Total number of successful students (Y)	48.00	41.00	34.00
Total number of students appeared in the examination (Z)	48.00	43.00	37.00
API [X * (Y/Z)]	6.72	5.84	5.01

Average API [(AP1 + AP2 + AP3)/3] : 5.86

Assessment [1.5 * AverageAPI] : 8.78

4.5 Placement, Higher Studies and Entrepreneurship (40)   Total Marks 30.53

                                                                                 Institute Marks : 30.53

Item	LYG (2016-17)	LYGm1 (2015-16)	LYGm2 (2014-15)
Total No of Final Year Students(N)	33.00	42.00	29.00
No of students placed in the companies or government sector(X)	22.00	34.00	22.00
No of students admitted to higher studies with valid qualifying scores(GATE or equivalent State or National Level tests, GRE, GMAT etc.) (Y)	1.00	1.00	0.00
No of students turned entrepreneur in engineering/technology (Z)	0.00	0.00	0.00
x + y + z =	23.00	35.00	22.00
Placement Index [(X+Y+Z)/N] :	0.70	0.83	0.76

Average Placement [(P1 + P2 + P3)/3] : 0.76

Assessment [40 * Average Placement] : 30.53

Program Name :
Assessment Year Name : CAYm1

S.No	Student Name	Enrollment No	Employee Name	Appointment No
1	Arpitha M R	1RI16CS006	Nutshell	Nutshell/17/1/20
2	Bindushree P M	1RI16CS011	Nutshell	Nutshell/17/1/20
3	George James	1RI16CS017	Sap Labs India Pvt Ltd	210653
4	Hemalatha R	1RI16CS020	iSE Global Solutions	iSEGlobalSolutions/6/12/19
5	Imran Khan	1RI16CS021	Tata Consultancy Servies Pvt Ltd	TCSL/DT20206535227/Bangalore
6	Kumari Priya	1RI16CS023	B2BC	B2BC/11/03/20
7	Lakshmishri B L	1RI16CS025	Capgemini	Capegemini Ref:4552533/810355
8	Lavanya R	1RI16CS026	Nutshell	Nutshell/17/1/20
9	Likhita Y	1RI16CS027	Nutshell	Nutshell/17/1/20
10	Nishath R Dalayat	1RI16CS029	iSE Global Solutions	iSEGlobalSolutions/6/12/19
11	Pooja R R	1RI16CS030	iSE Global Solutions	iSEGlobalSolutions/6/12/19
12	Prajwal R	1RI16CS032	SJM Infotech Pvt Ltd	SJM/TSD/845/2019-2020
13	Rajeshwari C	1RI16CS035	Legato Health technologies	Legato/7/11/20
14	Supriya P	1RI16CS046	Ahana Systems and solutions	Ahana Systems and solutions/13/01/2021
15	Vaanyashree P M	1RI16CS049	Nutshell	Nutshell/17/1/20
16	Vaishnavi N	1RI16CS050	Neel-Tech International Pvt Ltd.	Neeltech/16/10/20
17	Yashwini K	1RI16CS052	Ramaiah Institute of Technology (MBA)	MSRIT/PG-Admission(MGT)/2021-22/09
18	Karthik D	1RI16CS054	zwayam Digital Pvt Ltd	Zsupports/7/9/21
19	Amrit Sharma	1RI16CS055	LOR	RRIT/LR/2020-21/92
20	Kannan S	1RI16CS056	Manyathy Business Solutions	Ref:HRD/01012020/OL05
21	Yashas	1RI16CS057	NextRu Livelihoods Pvt Ltd.	Ref:2242_EAL_21-22_192
22	Nithesh Kumar N G	1RI16CS058	Smart ERP (Intern)	Smarterp/19/07/21
23	Rajala Tejashwini	1RI17CS401	Codezero2pi	Codezero2pi/3/7/21

Assessment Year Name : CAYm2

S.No	Student Name	Enrollment No	Employee Name	Appointment No

S.No	Student Name	Enrollment No	Employee Name	Appointment No
1	Akhila	1RI15CS001	Troppus Web Solutions Pvt Ltd	Troppus/30/10/19
2	Ankita Shukla	1RI15CS005	Ramaiah University	Id no:19MCMS047008
3	Ashwini Deshpande	1RI15CS009	Brillio	Brillio/4/10/20
4	Baba Bharath G.K	1RI15CS010	Kedge Infotech Pvt Ltd	Kedge/18/10/19
5	Bindu S	1RI15CS012	Intel Internship	Intel/12030278
6	Chandana M S	1RI15CS014	Sonata Software	SSL/HR/APPT/19/5le382ed-9ded-4315-8cd6-4f5df77524eb
7	Divya S	1RI15CS016	Aryan Solutions	Aryansolutions/16/7/2019
8	Gayathri	1RI15CS018	Zest	CC034
9	Hari Kirthi	1RI15CS020	Excelsoft Technologies	Excelsoft/11/10/19
10	Hemalatha	1RI15CS021	SAP	Offered:204098
11	Indu B	1RI15CS022	Hudson Agile Venture	HudsonAgileVentures/01/12/20
12	Irfan	1RI15CS023	Inspirage	Inspirage/16/7/19
13	Kavya R	1RI15CS025	Manyathy Business Solutions	HRD/01012018/OR171
14	Mary Roopini	1RI15CS030	Cap Gemini	Offer Id:46018101
15	Munshad Ali	1RI15CS031	Manyathy Business Solutions	HRD/01012018/OR102
16	Nayana H V	1RI15CS032	Herbalife Nutrition	Herbalife/2019
17	Nikhil B K	1RI15CS033	Aris Global	ArisGlobal/17/12/19
18	Rahul M	1RI15CS036	Conitor software Pvt Ltd	Conitor/1/10/19
19	Sathish P	1RI15CS048	Samsung	Emp Id:20526609
20	Shwetha M	1RI15CS052	Acuver	Acuver/29/5/20
21	Srikanth B.R	1RI15CS056	Streamline Healthcare solutions	ID;0233
22	Tanaya Patra	1RI15CS058	CMS	CMS/27/02/19
23	Varun Bhardwaj	1RI15CS060	Manyathy Business Solutions	HRD/01012018/OR102
24	vibha reddy K V	1RI15CS061	Manyathy Business Solutions	HRD/01012018/OR102
25	Vinutha H	1RI15CS062	CSS CORP Pvt Ltd	CSSCORP/10/4/21
26	Prakash Rayamajhi	1RI15CS064	Qspiders campus connect	Qspiders/5/3/19
27	Yojana Aryal	1RI15CS067	Deerwalk Services	Deerwalk/15/2/21
28	Smriti	1RI15CS072	Zegal Nepal Pvt Ltd	Zegal/29/4/21
29	mounika pv	1RI15CS073	Manyathy Business Solutions	HRD/01012018/OR102
30	Shiva Selvi	1RI15CS078	Q Spiders	Qspiders/5/3/19
31	Vasuki	1RI15CS079	ABC Company	Aryaan/16/7/19
32	Krishna Rajbanshi	1RI16CS402	Meem Memory Development Studio Private Ltd	Meem/14/2/20
33	Pratibha	1RI16CS405	Utthunga Technologies Pvt Ltd	Utthunga/14/6/21
34	Nagaraj T	1RI16CS404	Manyathy Business Solutions	HRD/01012018/OR102

Assessment Year Name : CAYm3

S.No	Student Name	Enrollment No	Employee Name	Appointment No
1	Aswini Reddy	1RI14CS003	ExcelSoft	ExcelSoft/1/7/21
2	Dhanya Rani A	1RI14CS005	Manyathy Business Solutions	HRD/01012018/OR171
3	Dileep Vishwakarma yathy Business Solutions	1RI14CS006	Manyathy Business Solutions	HRD/01012018/OR151
4	Dhinesh	1RI14CS008	Manyathy Business Solutions	HRD/01012018/OR105
5	Gaurav	1RI14CS010	Inspired Memories	Inspired/16/10/19
6	Harsh Chawda	1RI14CS011	Manyathy Business Solutions	HRD/01012018/OR171
7	Harshal Verma	1RI14CS012	Manyathy Business Solutions	HRD/01012018/OR104
8	Hemanth Kumar AM	1RI14CS013	Manyathy Business Solutions	HRD/01012018/OR154
9	Kavya C	1RI14CS014	Bit by Bit computer Service Pvt Ltd	BbB/27/2/19
10	Kiran S	1RI14CS016	Manyathy Business Solutions	HRD/01012018/OR103
11	Kundan Kumar	1RI14CS017	Manyathy Business Solutions	HRD/01012018/OR153
12	Lavanya R	1RI14CS018	Microland	Microland/21138
13	Mamtha C G	1RI14CS019	Interviewbit	Interviewbit/24/06/18
14	Naga Venkata Swetha	1RI14CS022	Manyathy Business Solutions	HRD/01012018/OR150
15	Pushpa H N	1RI14CS024	HDFC Bank	Employee code:259052
16	Megha M	1RI14CS026	Inspired Memories	Inspired/16/10/17
17	Shamantha Yadav S U	1RI14CS029	Parvam	Parvam/23/6/18
18	Shashikiran S	1RI14CS030	Sonata	Ref:SSL/HR/APPT/18/2bef3692-a1c2-4a8b-9f13-82853e0d6739
19	Usha Pandith	1RI14CS035	Manyathy Business Solutions	HRD/01012018/OR152
20	Vinduja	1RI14CS037	Parvam	Parvam/23/6/18
21	Mohan Miah	1RI15CS403	Bizruntime	Bizruntime/2/11/20
22	Poonam Kumari	1RI15CS404	Quench Techno Valley	QTV/BGL/HR/AL/.001

4.6 Professional Activities (20)   Total Marks 15.00

4.6.1 Professional socities/ chapters and organizing engineering events (5)   Institute Marks : 3.00

The list of professional societies are listed in the table 4.6.1(i) and 4.6.1(ii) shows the organized engineering events.

Table 4.6.1(i): List of Professional Societies

Sl. No.	Professional Societies	Acronym
1	Indian Society for Technical Education	ISTE
2	Computer Society of India	CSI

4.6.1(ii) Organized Engineering Events

Sl.No	Year	Activity	Resource persons	Date	No. of Participants
1	2019-20	Seminar on IT Technology and Emerging Trends	Mr. Ameet Gogi Business Head Livewire Company, Banglore	30/08/2019	91
2	2019-20	Guest Lecture "Discrete Mathematics and its Application"	Dr. Anupama H S Associate Professor Machine Learning and Artificial Intelligence Department, BMSIT&M, Bengaluru	16/08/2019	40
3	2019-20	Career In Cyber Security	Mr. Vishal Pradhan, Senior Security Engineer/Team Lead QOS Technology, Bengaluru	19/08/2019	137
4	2019-20	Career Opportunities & Awareness on Higher Studies"	Mrs. Nagamani, Assistant Manager-Cannada, IDP Education India Pvt Ltd, Bengaluru	29/08/2019	52
5	2019-20	Seminar on Xcelarator skill augmentation Program	Mr. Dipraj Mukherjee Manager Xcelarator, Bengaluru	20/09/2019	87

6	2019-20	Guest lecturer on Automata theory & Computability	Dr. Usha B Associate Professor ISE Department, BMSIT&M, Bengaluru	01/10.2019	44
7	2019-20	3 days Course on "3d Experiences Platform in Aircraft and Aerospace Engineering	Dr. Nataraj Raman Chief Executive Officer (CoE A&D) Bengaluru	24/10/2019,30/10/201 to 31/102019	100
8	2019-20	Hands on Workshop on "Hands on Machine learning using Anaconda Tool	Mr. Venkat Vishwanath Palli Programming Analyst Lead at Qualcomm Bengaluru	08/11/2019	43
9	2019-20	SDP on "Advance Computer Architecture	Dr. Minal Mohair Associate Professor Department of Computer Science Engineering R V College Engineering Bengaluru Dr. Sharvani Associate Associate Professor Department of Computer Science Engineering R V College Engineering Bengaluru	08/11/2019	35
10	2019-20	Work shop on" Full stack Web Development	Mr. Ameeth Gogi Business Head Livewire Company Bengaluru	15/11/2019 to 16/11/2019	42
11	2019-20	FDP on "Embedded System Design and IOT"	Dr. Srinivas Shetty, SST Technology, Bengaluru	04/02/2020 to 05/02/2020	45
12	2019-20	Seminar on Introduction to Python and Machine Learning	Mr. Sudrshan Manager Chira Information Technology Bengaluru	19/02/2020	41
13	2019-20	FDP" Block Chain technology	Mr. Ramesh Gopal Block Chain Training Head Nvest labs Bengaluru Mr. Sharath Krishna CEO of Nvestlabs Bengaluru	26/02/2020	41
14	2019-20	Technical Seminar on" Java Programming"	Mrs. Sripriya Mathan Founder & Chief Instructor of Sristi Technology Bengaluru	07/03/2020	45
15	2019-20	FDP on "Rapid Application development using Oracle ADf"	M. Pohit Santhosh Technlogy Director Parvam Consultant Pvt. Ltd, Bengaluru	20/05/2020 to 22/05/2020	35
16	2019-20	Technical seminar" Food technology in Machine Learning	Dr. GuruRaj H L, Professor Vidyavardaka college of Engineering Mysore	26/05/2020	36
17	2019-20	SDP on" THE Flutter Bootcamp	Mr. Amith K S Managing Director Manyathy Business Solutions, Bengaluru	27/05/2020 to 28/05/2020	72

18	2019-20	SDP on "Internet of Things with hands On Session	Mr. Sapthagireesh D M Tech lead Acranton technologies Bengaluru	18/06/2020	50
19	2019-20	Technical Seminar on "Java Programming"	Dr. Ajay Prakash B V, Associate Professor, SJBIT, Bengaluru	19/06/2020	40
20	2019-20	Guest Lecturer on "Shortest Path Algorithms in Design and Analysis of Algorithms"	Dr. Kavitha Halappa, Professor, SIT, Tumakuru	29/06/2020	40
21	2019-20	Workshop on "Personality Development and Resume Building"	Mr. Mohammed, Habbeb, Technology Director, Parvam Consul Tech Pvt Ltd, Bengaluru	30/06/2020	100
22	2019-20	Certification program on "Natural Language Processing with Python	Mr. Thiyagu Chandran, Data Analyst, Accenture, Chennai, Tamilnadu	01/07/2020 to 11/07/2020	214
23	2019-20	2 Days SDP on "Ethics and Integrity"	Mr. Dhananjaya M K, R.R Institute of Technology, Bengaluru. Mrs. Swetha K B, R.R Institute of Technology, Bengaluru	16/07/2020 to 17/07/2020	50
24	2019-20	Career Awareness on "Classroom without boundaries"	Ms. Christy Martina J, Manager, HR & Training, Caliber Minds Technologies, Coimbatore	17/07/2020	92
25	2019-20	2 Days Workshop on "Data Masking and Informatica Tools"	Mrs. Bhagya R, Technical Lead, EVERY India Pvt ltd, Bengaluru	18/07/2020 to 19/07/2020	104
26	2019-20	Seminar on "Technical Paper Writing"	Dr. Naveen M, R.R. Institute of Technology, Bengaluru.	27/07/2020	40
27	2019-20	Technical Seminar on "Wireless Communication and Networking"	Mr. Harish N, CTO, Karunadu Technologies Pvt Ltd, Bengaluru	24/07/2020	71
28	2019-20	Technical Seminar on "Telecom Network Synchronization"	Ms. Shwetha S S, Software Engineer, Avaya, Bengaluru	25/07/2020	60
29	2019-20	Workshop on "Automata Simulation"	Prof. T P Deepa, Assistant Professor, Jain University, Bengaluru	27/07/2020	53
2018-19					
30	2018-19	Seminar on "Exposure to Entrepreneurship Activity"	Mr. Amarendra Kumar, Founder & CEO, Telenoc Solutions, Bengaluru	23/08/2018	127

31	2018-19	Seminar on "GATE Exam and Scholarship Test"	Mr. Rejith M S, BDM GATE Forum, Bengaluru	17/09/2018	56
32	2018-19	Seminar on "Overseas Education Opportunities"	Mayuri N, Assistant Manager, US & Canada, IDP Education India Pvt Ltd	18/09/2018	56
33	2018-19	One Day Workshop Program on" BIG DATA AND HADOOP	Mr. Nilesh Lumar Gupta, Head of Operations, EduNextgen Bengalore	03/10/2018	56
34	2018-19	Seminar on "Technology Trends in IT Industry"	Dr. Majunath T, Prof & Head, ISE Department BMSIT, Bengaluru	20/11/2018	30
35	2018-19	One Day Workshop Program on Machine Learning"	Prof. Girish Babu C N & Prof. Vinutha K, Ass. Professors of ISE, BMSIT, Bengaluru	30/11/2018	56
36	2018-19	Workshop on "Innovation and manufacturing Startups"	Dr. T V Prabhakar Principal Research Scientist & Head of the MSME, Center of Excellence Sri. Mohan Krishna Head of CEO-Data Science & Artificial Inteligence, NASSCOM, Bengaluru H V Amanda Murthy Dy Dir(retd), M/o MSME, GOI Sri K N Mr. Manjunath Lead Manager, Canara Bank	15/02/2019	5
37	2018-19	Seminar on Introduction to Data Science	Mr. Prithivi Raj GE-Digital, Bengaluru	16/02/2019	81
38	2018-19	Seminar on Effective Career Planning after UG Program	Mr. Prakash Educator, Vani Institute, Bengalore	20/02/2019	80
39	2018-19	Seminar on "Hadoop Eco System"	Mr. Ramu k, Module Lead, Mind Tree, Bengaluru Mr. Vasanth, Application Developer, Accenture, Bengaluru	02/03/2019	71
40	2018-19	Seminar on "An Introduction to java Script & python	Mr. Theodore Manning Louis, Bengaluru	03/04/2019	69
41	2018-19	Technical Talk on Computer Networks & Network Security	Mrs. Susitna Jetking, Bengaluru	04/04/2019	104
42	2018-19	Technical Talk on Embedded systems	Mr. Sanjay Kumar, Founder, Jyothi Embedded labs, Bengaluru	05/04/2019	46
43	2018-19	Guest Lecture on Sorting Techniques	Dr. Kavitha H, Associate Professor, Department of Information Science & Engineering, SIT, Tumkuru	09/04/2019	35
44	2018-19	Workshop on Arm7 process and its application	Dr. Sreeivasa Settee, SST Technologies	24/04/219	37

45	2018-19	Workshop on Python Application Development using Django & SQLite	Mr. Ashoka Kumar K Technical Head, XON Lab, Bengaluru	25/04/2019	48
46	2018-19	Project Exhibition "MERAKI"	Mr. Sumanth CSE Department, RRIT Dr. Sarvana S. CSE Department, RRIT	03/05/2019	56
47	2018-19	International Conference on Recent Innovation in Science, Engineering & Management	Prof. Levis SIT, Bengaluru Prof. Komala, JNU, AP	10/05/2019 to 11/05/2019	40
2017-18					
48	2017-18	Workshop on "JAVA Application Development"	Mr. Rajesh T, Corporate JAVA Trainer, Start Career, Bengaluru	13/04/2017	60
49	2017-18	Handson workshop on Networking	Mr. H A Abdul Sajid, Jetking, Bengaluru	27/10/2017 to29/10/2017	51
50	2017-18	Visit to Solar Power Plant Shivanasamudra in Association with KSSIA	Mrs. Tejaswini & Mr. Nethaji Assistant Engineers, SPP Shivanasamudra	25/03/2018	50
51	2017-18	Visit to ISM UNIV, Bengaluru	Dr. Loganathan Head of Ism ISM UNIV, Rajaji Nagar, Bengaluru	15/04/2018	50
52	2017-18	Visit to "National Level Project Exhibition and Conference"	Mr. Dhananjaya M K, R.R Institute of Technology, Bengaluru	11/05/2018	10
53	2017-18	Project Exhibition "MERAKI"	Mr. Patel M S, Associate Professor, CSE Department, RRIT	15/05/2018	34
54	2017-18	FDP on "Computer Fundamentals, M S Office and Latex"	Prof. Selvakumar, Professor, BMS College of Engineering, Bengaluru	28/07/2018 29/07/2018	20

4.6.2 Publication of technical magazines, newsletters, etc. (5)   Institute Marks : 4.00

The list of publication of technical magazines and newsletters are shown in table 4.6.2(i).

Table 4.6.2(i): List of publication of Technical Magazines and Newsletters

Sl. No	Year	Name of the Magazine/News letter	Editorial Board	Chief Editor
4	**2019-20**	Newsletter, Issue1, Volume 4	Mr.Yeshwanth T U Mr.Mohan Krishna Mrs.Jyothi R	Manjunath R
5	**2019-20**	Newsletter, Issue2, Volume 4	Mr.Yeshwanth T U Mr.Mohan Krishna Mrs.Jyothi R	Manjunath R

6	2019-20	Magazine SAMKHYA 2019-20	Mr.Anshu Deepak, Mrs. Swetha K B, Mrs.Jyothi R, Mrs.Lakshmi , Mr. Shreedhar Murthy Mr.George James	R Navaneeth Krishna
7	2018-19	Newsletter, Issue1, Volume 3	Ms.Bindhu S Mr.Nishanth R Dalawadi Mr.Mohan Krishna Mrs.Jyothi R Mrs.Shruthi S	Manjunath R
8	2018-19	Newsletter, Issue2, Volume 3	Mr.Nishanth R Dalawadi Mr.Mohan Krishna Mrs.Jyothi R	Manjunath R
9	2018-19	Magazine SAMKHYA 2018-19	Mr. Anshu Deepak, Mrs. Swetha Mrs. Jyothi R, Mr. Lakshmi , Mr. Shreedhar Murthy Ms.Prerana D	R Navaneeth Krishna
10	2017-18	Newsletter, Issue1, Volume 2	Ms.Sheethal Gowda Mr.Irfan Pasha Ms Arpitha M R Mrs.Jyothi R Mr Manjunath S patel Mr.ravindra Prasad S	Prasad Babu
11	2017-18	Newsletter, Issue2, Volume 2	Ms.Bindhu S Mr.Nishanth R Dalawadi Mr.Kiran Kumar Mrs.Jyothi R Mr Manjunath S patel Mr.ravindra Prasad S	Prasad Babu
12	2017-18	Magazine SAMKHYA 2017-18	Mrs. Anshu Deepak Mrs. Swetha K B, Mrs. Jyothi R, Mrs. Lakshmi , Mr. Shreedhar Murthy Ms.Mamatha C G	Navaneeth Krishna

4.6.3 Participationininter-institute events by students of the program of study (10)

Institute Marks : 8.00

The list of students participation in Inter institute events and awards / recognition received are shown in table 4.6.3(i)

Sl No	Students Name	Participated/Presented/Published	Name of the Organization/Institute	Date	Program Title
1	Hemalatha R	Participated	UDEMY, Bengaluru	May 2020	Course on HTML, TCS
2	Hemalatha R	Participated	TCS-ion, Bengaluru	April 2020	Career Edge Knockdown the Lockdown
3	Rajeswari C	Participated	CEC, Bengaluru	June 2020	Seminar on "Defense in depth approach to secure web applications on AWS Cloud"

4	Season Rijal	Participated	CEC, Bengaluru	June 2020	Seminar on "Defense in depth approach to secure web applications on AWS Cloud"
5	Likitha Y	Participated	CEC, Bengaluru	June 2020	Seminar on "Defense in depth approach to secure web applications on AWS Cloud"
6	George james, Asraar Contractor, Birbal Subba, Pradip Ghatrimagar	Published	IJIRCCE, Anakaputhur, Tamil Nadu	July 2020	Adaptive Deep Residual Network for Signal Image Super Resolution
7	Akshya N Mohan, Srinivas G	Published	IJIRCCE, Anakaputhur, Tamil Nadu	July 2020	Detection of Plant Leaf Dieses by using Image Processing Approaches
8	Sona sara Thomas, Kumari Priya, Rajala Tesaswini, Sayantani Sarkar	Published	IJIRCCE, Anakaputhur, Tamil Nadu	July 2020	Wireless Communication UAVs
9	Varsha S, Supriya, Asha	Published	IJIRCCE, Anakaputhur, Tamil Nadu	July 2020	Charging station for E vehicle using Solar with IOT Multiple Users
10	Ankit Yavdav, Rakshit Koul, Ritu Raj, Vishal Gupta	Published	IJIRCCE, Anakaputhur, Tamil Nadu	July 2020	Tracking and Warning system for Fisherman Using IOT
11	Lakshmishri B L, Pooja R R, Vaanyashree P M, Yashaswini	Published	IJIRCCE, Anakaputhur, Tamil Nadu	July 2020	Bionic EYE: Retinal prosthesis to Restore Eyesight
12	Imran Khan, Season Rijal, Shreejit Pillai, Umesh kandel	Published	IJIRCCE, Anakaputhur, Tamil Nadu	July 2020	Enhanced BCI Intelligent Wheelchair System based On Alpha wave and SSVEP EEG Signals
13	Kannan S, Arjun N, Vaishnavi N, Sahana T	Published	IJIRSET, Chennai, Tamil Nadu	July 2020	Automatic gas Leakage Detection and Booking on Gas Level using IOT
14	Karanam Yashas Chandra, Nithesh Kumar N G	Published	IJIRSET, Chennai, Tamil Nadu	July 2020	Prediction of Software Defect using supervised Machine Learning practices
15	Rajeshwari C, Akshatha M R	Published	IJIRCCE, Anakaputhur, Tamil Nadu	July 2020	A Study on Machine learning Algorithms, LDTM, and DATA Science Model for Mental health Application
16	Bindushree P M, Likitha Y, Hemalata R	Published	IJIRCCE, Anakaputhur, Tamil Nadu	July 2020	Innovative Creation of Virtual Personal Assistant for New ERA

17	Imrann Khan Season Riajal, Shreejith Pilllai, Umesh Kandel	Published	IJIRSET, Chennai, Tamil Nadu	July 2020	Robust Early Detection Mechanism for IOT enabled Landslide Monitoring using Lora Technology
18	Sona sara Thomas, Kumari Priya, Rajala Tejashwini, Sayantani sarkar	Published	IJIRSET, Chennai, Tamil Nadu	July 2020	GPS based Solider Tracking and Health Indication System
19	Prathiba I Biligi,prithika Adikari,Repshika Pardhan	Published	IJIRSET, Chennai, Tamil Nadu	July 2020	Phishing Detection using Improved RCNN Model with Multilevel vectors and Attention Mechanism
20	Ankit Yadav, Rakshit Koul, Ritu Raj, Vishal Gupta	Published	IJIRSET, Chennai, Tamil Nadu	July 2020	Smart glass for visually Impaired
21	George james, Birbal subbha, Asraar Contractor, Pradip magar	Published	IJIRSET, Chennai, Tamil Nadu	July 2020	Image processing Based Solar Powered Fire Detection and Extirpation Robot
22	Aaksah Kumar, Sathya Murthy, Prajwal, Karthik	Published	IJIRSET, Chennai, Tamil Nadu	July 2020	An Efficient and Secured OTP Enabled File Sharing Service over Big data Environment
23	Amit singh	Participated	SJBIT Bangalore	July 2020	Workshop on Mobile Application Development
24	Brijesh kumar	Participated	SJBIT Bangalore	July 2020	Workshop on Mobile Application Development
25	George James	Participated	RRIMS, Bengaluru	April 2019	Workshop on Augmented Reality
26	Vishal Gupta, Akash K Singh, Asraar Contractor	Published	IJICS, Pune, Maharashtra	May2019	Deep Machine Learning in Games in Artificial Intelligence
27	Avinash Gaurav, Amith Kumar Shani, Julius Daimary	Published	IJSRR, Rajasthan	May2019	Cloud based Android Application with NFC for Remote Access
28	V Joel, Rajat , Gangawani, Munshad Ali	Published	IJSRR, Rajasthan	May2019	Smart Garbage Monitoring System using IOT
29	Baba Bharath G K,Vaibhav Reddy K V,Vinutha H Nagaraj T	Published	IJSRR, Rajasthan	May2019	Predicting Multiple Dieses Using Machine Learning Techniques
30	Ankit Shukla, Rahul M, Sowmya M V,	Published	IJSRR, Rajasthan	May2019	Blind navigation System using Hurdles Recognition

31	Sathish P, Nikhil B K, Varun Bharadwaj H R,Srikanth B R	Published	IJSRR, Rajasthan	May2019	Online Variation Interface for The Hierarchical Topics Detection Frames work
32	Baba Bharath G K,Vaibhav Reddy K V,Vinutha H Nagaraj T	Published	IJSRR, Rajasthan	May2019	Comparative Performance of Machine Learning and Deep Learning Algorithm on Imbalanced Handwritten Data
33	Krishan Rajbanshi, Milan Shrestha, praksah Rayamajhi Raghav Kateel	Published	IJSRR, Rajasthan	May2019	Spider RR College Networking Application
34	Drawpada Sharma, Smrithi Ghimire, Tanaya Patra Yojana Aryal	Published	IJSRR, Rajasthan	May2019	Autonomous Vehicle with Traffic Density Avoidance and Live Video Streaming using Artificial Intelligence with Embedded C
35	Prerana D, Vasuki E M, Prathihba Mallappa Alakanur	Published	IJSRR, Rajasthan	May2019	Agronomy Monitory Robot Using Iot Technology
36	Biswas Subedi, Rupesh Timalsina, Archana Bhatta, Salim M Gumbo	Published	IJSRR, Rajasthan	May2019	Generic Application for Sensor Application using IOT
37	Hemalatha C, Ashwini Shridhar Deshapande, Mary Roopini A, Gayathri H D	Published	IJSRR, Rajasthan	May2019	A Modern Real Time water Quality Monitoring System using IOT
38	Bidhu S,harikireethi B K, Irfan Pasha F, kavya R	Published	IJSRR, Rajasthan	May2019	An Effective Big Data frame Work based on Farmer's Agriculture Context
39	Chandana M S, Indu B, Nayana H V,Soundarya V R	Published	IJSRR, Rajasthan	May2019	Cloud Based Soil Moisture Measuring System Using IOT In Indian Agriculture
40	Bidhu S, Harikireethi B K, Irfan Pasha F, kavya R	Presented	NCETETAR, MSEC, Bengaluru	June 2019	Big Data Analysis in Hadoop Technology
41	Rajath Gangawani, Julius Daimary	Presented	NCETETAR, MSEC, Bengaluru	June 2019	Urban Planning and development of Smart cities using OIT And Big data
42	Nayana H V, Chandana M S, Indu B, Soundarya V R	Presented	NCETETAR, MSEC, Bengaluru	June 2019	Green House monitoring system Using OIT and Cloud Computing

43	Kavya R, Irafn Pasha F, Hari kireethi B K, Bindu S	Presented	NCETETAR, MSEC, Bengaluru	June 2019	Analysis of simplified Data on large cluster using Map Reduce Technique
44	Krsihna Rajbanshi, Milan Shrestha, Prakash Rayamajihi Rgahav Kattel	Presented	NCETETAR, MSEC, Bengaluru	June 2019	Smart manufacturing in industries using digital Twin Technique
45	Chandana M S,Indu B,Nayana H V,Soundarya V R	Presented	NCETETAR, MSEC, Bengaluru	June 2019	Environmental Monitoring Using Sensor Networks in IOT
46	George James	Participated	IISC, Bengaluru	Sept 2019	Hands on Training Cyber Security and Ethical hacking
47	Akshay N Mohan	Participated	Mysore Dasara	October 2019	Yoga
48	George James	Participated	St Joseph Church Tournament,Bengaluru	Dec 2019	Volley ball Tournament
49	Akshay N Mohan	Participated	KSLOC	DEC 2019	Yoga
50	Aman A. Sexena, Jeevan B, Vinay P, Vageesh N J	Published	IJERCSE, Coimbatore, Tamil Nadu	June 2017	Analyzing Tweets for Real Time Event Detection and Development of Earthquake Reporting System
51	Rashmi S Shetty, Sushmitha S Siddanagoudar, Vidyashree G, Asha N	Published	IFERP, Chennai, Tamil Nadu	June 2017	Cyber bullying Detection in Lights of Semantic Enhanced Marginalized De Noising Auto Encoder
52	Krishna Mohan Shah, Gaurav Bhusal, Kirti Lata,J Megahana Patel	Published	IFERP, Chennai, Tamil Nadu	June 2017	Eliminating Duplicate Data in cloud Storage with Dynamic Ownership and Security
53	Manisha Singh, Mranali Gupta, Surya R, Suhmitha Narayan	Published	IFERP, Chennai, Tamil Nadu	June2017	Resisting Shoulder Surfing Attacks Using Secured Graphical Pass Matrix Authentication Scheme
54	Arvind Kumar, Chauhan Akash, Nithin M E,Pashanth G D	Published	IJERCSE, Coimbatore, Tamil Nadu	Aug 2017	Plant identification System using Leaf Feature Plant

Awards and Recognition					
Sl. No.	Students	Recognition	Place	Title	Year
1	Mr. Kiran Kumar Mr. Dinesh Ms. Kavya Ms. Deepika	Recognition	VTU Belgum Karnataka	An Efficient and fine rained Big Data Access Control Schema with Privacy Preserving Policy	2017-2018
2	Mr.Alvira Ansari, Mr. Faiyaz Ahamed, Mr. Gaurav Arya	Recognition	VTU Belgum Karnataka	Intelligent Traffic Light Control by Embedded Systems	2017-2018

3	Mr. George James Mr. Birbal Subba Mr. Asraar Contractor Ahemd Mr. Pradip Gharti Magar	Project funded by KSCST	KSCST, Bengaluru	Image Processing Based Solar Powered Fire Detection and Extirpation Robot	2019-2020
4	Akshay N Mohan	Gold Medal	Mysore,Karanataka	Yoga siriprabodhapatra	2019-2020
5	Mr. Ankit Yadav, Mr. Rakshit Koul, Ritu Raj, Mr. Vishal Gupta	Project funded by KSCST	KSCST, Bengaluru	Smart glass for visually Impaired	2019-2020
6	Mr. Rajeshwari C, Mr. Akshatha M R	Awarded as Best Paper	IJIRSET, Chennai, Tamil Nadu	Deep Learning for the detection of Covid 19 using Chest radiographs	2019-2020
7	Mr. Bindushree P M, Likitha Y, Mr. Hemalata R	Awarded as Best Paper	IJIRCCE, Anakaputhur, Tamil Nadu	Innovative Creation of Virtual Personal Assistant for New ERA	2019-2020
8	Akshay N Mohan	Frist Place	Bangalore,Karanataka	National level open yoga championship	2019-2020

5 FACULTY INFORMATION AND CONTRIBUTIONS (200)   Total Marks 140.78

Name	PAN No.	University Degree	Date of Receiving Degree	Area of Specialization	Research Paper Publications	Ph.D Guidance	Faculty receiving Ph.D during the assessment year	Current Designation	Date (Designated as Prof/Assoc. Prof.).	Initial Date of Joining	Association Type	At present working with Institution(Y
Vinutha B T	AYEPT6278M	M.E/M.Tech	16/11/2015	Computer Science & Engineering	1			Assistant Professor		27/07/2015	Regular	Yes
NETHRA MVO	AOMPN2350J	M.E/M.Tech	03/05/2014	Computer Science & Engineering	5			Assistant Professor		27/01/2016	Regular	Yes
JYOTHI R	AWWPJ4738L	M.E/M.Tech	15/03/2016	Computer Science & Engineering	7			Assistant Professor		07/08/2017	Regular	Yes
SHRUTHI S	ENUPS5721R	M.E/M.Tech	09/01/2018	Computer Science & Engineering	14			Assistant Professor		07/08/2017	Regular	Yes
MANJUNATH R	ANZPN8492N	ME/M. Tech and PhD	27/02/2019	Computer Science & Engineering	25	1		Professor		02/07/2018	Regular	Yes
MALA P	BTJPP1527L	M.E/M.Tech	08/07/2013	Computer Science & Engineering	2			Assistant Professor		16/08/2018	Regular	Yes
DHANANJAYA MK	BJHPD2464E	M.E/M.Tech	10/02/2009	Computer Science & Engineering	13			Assistant Professor		30/07/2012	Regular	Yes
RANJITH V	CAYPR6066D	M.E/M.Tech	03/05/2014	Computer Science & Engineering	3			Assistant Professor		05/02/2020	Regular	Yes
NITHIN K	AUVPN1644E	M.E/M.Tech	05/04/2013	Computer Science & Engineering	7			Assistant Professor		03/02/2020	Regular	Yes
PREMA C	ALFPC9993E	M.E/M.Tech	04/03/2013	Computer Science & Engineering	3			Assistant Professor		08/06/2017	Regular	Yes
SUMANTH V	AJIPV1699P	M.E/M.Tech	09/04/2012	Computer Science & Engineering	6			Assistant Professor		03/08/2012	Regular	Yes
PRASAD B R	ADWPP6902F	ME/M. Tech and PhD	16/02/2008	Computer Science & Engineering	0			Professor		15/07/2016	Regular	No
M S PATEL	AOQPP6150H	ME/M. Tech and PhD	09/01/2018	Computer Science & Engineering	1			Associate Professor		18/07/2016	Regular	No

5.1 Student-Faculty Ratio (20)

Total Marks 14.00

Institute Marks : 14.00

UG

No. of UG Programs in the Department 1

Year of Study	Computer Science & Engineering					
	CAY		CAYm1		CAYm2	
	(2020-21)		(2019-20)		(2018-19)	
	Sanction Intake	Actual admitted through lateral entry students	Sanction Intake	Actual admitted through lateral entry students	Sanction Intake	Actual admitted through lateral entry students
2nd Year	60	5	60	7	60	2
3rd Year	60	7	60	2	60	2
4th Year	60	2	60	2	60	5
Sub-Total	**180**	**14**	**180**	**11**	**180**	**9**
Total	**194**		**191**		**189**	
Grand Total	194		191		189	

PG

No. of PG Programs in the Department 0

Grand Total			

SFR

No. of UG Programs in the Department 1
No. of PG Programs in the Department 0

Description	CAY(2020-21)		CAYm1 (2019-20)		CAYm2 (2018-19)	
Total No. of Students in the Department(S)	194	Sum total of all (UG+PG) students	191	Sum total of all (UG+PG) students	189	Sum total of all (UG+PG) students
No. of Faculty in the Department(F)	11	F1	9	F2	10	F3
Student Faculty Ratio(SFR)	17.64	SFR1=S1/F1	21.22	SFR2=S2/F2	18.90	SFR3=S3/F3
Average SFR	19.25	SFR=(SFR1+SFR2+SFR3)/3				
F=Total Number of Faculty Members in the Department (excluding first year faculty)						

Note: All the faculty whether regular or contractual (except Part-Time), will be considered. The contractual faculty (doing away with the terminology of visiting/adjunct faculty, whatsoever) who have taught for 2 consecutive semesters in the corresponding academic year on full time basis shall be considered for the purpose of calculation in the Faculty Student Ratio. However, following will be ensured in case of contractual faculty:

1. Shall have the AICTE prescribed qualifications and experience.

2. Shall be appointed on full time basis and worked for consecutive two semesters during the particular academic year under consideration.

3. Should have gone through an appropriate process of selection and the records of the same shall be made available to the visiting team during NBA visit

5.1.1. Provide the information about the regular and contractual faculty as per the format mentioned below:

	Total number of regular faculty in the department	Total number of contractual faculty in the department
CAY(2020-21)	11	0
CAYm1(2019-20)	9	0
CAYm2(2018-19)	10	0

Average SFR for three assessment years :   19.25

Assessment SFR :   14

5.2 Faculty Cadre Proportion (25)

Total Marks 20.00

Institute Marks : 20.00

Year	Professors		Associate Professors		Assistant Professors	
	Required F1	Available	Required F2	Available	Required F3	Available
CAY(2020-21)	1.00	1.00	2.00	0.00	6.00	10.00
CAYm1(2019-20)	1.00	1.00	2.00	0.00	6.00	8.00
CAYm2(2018-19)	1.00	1.00	2.00	0.00	6.00	9.00
Average Numbers	1.00	1.00	2.00	0.00	6.00	9.00

Cadre Ratio Marks [(AF1 / RF1) + [(AF2 / RF2) * 0.6] + [(AF3 / RF3) * 0.4]] * 12.5 :   20.00

5.3 Faculty Qualification (25)

Total Marks 12.78

Institute Marks : 12.78

	X	Y	F	FQ = 2.5 x [(10X + 4Y) / F)]
2020-21(CAY)	1	10	9.00	13.89
2019-20(CAYm1)	1	8	9.00	11.67
2018-19(CAYm2)	1	9	9.00	12.78

Average Assessment :   12.78

5.4 Faculty Retention (25)

Total Marks 25.00

Institute Marks : 25.00

Description	2019-20	2020-21
No of Faculty Retained	9	9
Total No of Faculty	10	10
% of Faculty Retained	90	90

Average :   90.00

Assessment Marks :   25.00

5.5 Innovations by the Faculty in Teaching and Learning (20)

Total Marks 15.00

Institute Marks : 15.00

Innovative teaching and learning process is required for students to understand the curriculum. This helps in bridging the gap between the curriculum and the Industry.

- The Faculty members use modern teaching aids like PPTs, videos, Blogs, Live Demonstration in the classrooms to facilitate better understanding of concepts.
- In the Department of Computer Science & Engineering, much importance is given for incorporating innovative techniques in teaching. At department level, all the faculties are encouraged to attend the programmes such as faculty development workshops, faculty development programmes to promote the innovation techniques.
- The faculties are instructed to adapt the teaching aids that are learnt from attended programmes to take up the teaching learning process to the next level. Apart from this, the faculty members encourage the students to participate in various activities which are organized inter & intra institutions.
- Faculties & Students have been motivated to present & publish papers in National / International conferences and Journals to enrich their knowledge.

Following are the steps taken by the Faculty to improve teaching learning methodology.

- Brainstorming Session- For few subjects, at the end of every module, problem statement is given to student in the class room so that they can think quickly and generate solution.
- E-based Link exposure – URL links are shared to the Students for study and in depth understanding of the subject.
- Faculty organizes Seminar, Workshops, Expert talks so that students can understand the real world applications of different subjects.
- Institute level, Project Exhibition 'Meraki' is conducted for final year students and the best projects are appreciated by an award.
- Faculties are encoraged students to utilize college & department library for reference.

Details of innovative teaching methods adopted for few subjects are listed in the below table 5.5(i)

Table 5.5(i): Innovative teaching methods adopted for few subjects

Sl. No.	Semester	Subject Name & Subject Code	Innovation method	Description
1	1	Computer Programming Laboratory & 15CPL16/26	Tried different programs to understand subject. Programs other than lab programs.	Students were given few list of programs to execute other than lab programs
2	5	Management & Entrepreneurship for IT Industry & 15CS51	Activity based learning	Project report on few successful entrepreneurs were submitted by students.
3	5	DBMS Laboratory with Mini project & 15CSL58	Extension to mini projects were discussed with students.	Students presented mini projects, during that time extension features were discussed.
4	6	Computer Grphics & 15CSL68	Tool demonstration	Visual Studio tool were explained to students.

| 5 | 3 | Analog & Digital Electronics Laboratory & 15CSL37 | Videos | Few experiments demonstration were captured |
| 6 | 7 | Web Technology Laboratory with mini project & 15CSL77 | Designed few web pages with HTML Tags | Students prepared report on these web pages. |

E-content facility provided by faculties are listed in the below table 5.5.(ii)

Table 5.5(ii): E-content facility provided by faculties

Faculty Name	Courses	Name of E-content development facility	Link Details
Dr. Manjunath R	Internet of things	Blogspot	https://rmanjunathiot.blogspot.com (https://rmanjunathiot.blogspot.com/)
Prof. Sumanth V	Object oriented Concepts/Big Data Analytics	Blogspot	https://sumanthbigdatastudymaterials.blogspot.com (https://sumanthbigdatastudymaterials.blogspot.com/)
Prof. Dhananjaya M K	Modern Interface design/System Software and Compiler design	Blogspot	https://dhanunitte258.blogspot.com (https://dhanunitte258.blogspot.com/)
Prof. Jyothi R	Cryptography,Network Security and Cyber law/ Design and analysis of Algorithm	Blogspot	https://jyothiramakrishnaiah.blogspot.com (https://jyothiramakrishnaiah.blogspot.com/)
Prof. Shruthi S	Data mining/ Big Data Analytics	Blogspot	https://rajushruthi.blogspot.com (https://rajushruthi.blogspot.com/)
Prof. Mala P	Python programmimg and applications/C Programming for Problem Solving	Blogspot	https://malasrikanth.blogspot.com (https://malasrikanth.blogspot.com/)
Prof. Ranjith V	Cryptography,Network Security and Cyber law/ Design and analysis of Algorithm	Blogspot	https://ranjitheducom.blogspot.com (https://ranjitheducom.blogspot.com/)
Prof. Nithin K	Operating System/ Computer Graphics & Visualization	Blogspot	https://nithinstudy.blogspot.com (https://nithinstudy.blogspot.com/)

5.6 Faculty as participants in Faculty development/training activities/STTPs (15)

Total Marks 15.00

Institute Marks : 15.00

Name of the faculty	Max 5 Per Faculty		
	2019-20 (CAYm1)	2018-19 (CAYm2)	2017-18 (CAYm3)
Manjunath R	5.00	0.00	0.00
Prema C	5.00	5.00	2.00
Dhananjaya M K	5.00	1.00	5.00
Nethra MVO	0.00	4.00	0.00
Shruthi S	5.00	5.00	1.00
Sumanth V	5.00	0.00	0.00
Nithin K	5.00	0.00	0.00
jyothi R	5.00	5.00	3.00
Mala P	5.00	0.00	0.00
Ranjith V	4.00	0.00	0.00
Sum	44.00	20.00	11.00
RF = Number of Faculty required to comply with 20:1 Student Faculty Ratioas per 5.1	9.70	9.55	9.45
Assessment [3*(Sum / 0.5RF)]	27.22	12.57	6.98

Average assessment over 3 years: 15.59

5.7 Research and Development (30)

5.7.1 Academic Research (10)

Total Marks 14.00

Institute Marks : 8.00

Faculty Publication Details:

The list of publication are shown in table 5.7.1(i)

Table 5.7.1(i): Number of publications by faculty

Sl. No	Name of Faculty	CAYm3 2017-18	CAYm2 2018-19	CAYm1 2019-20
1	Dr. Manjunath R		5	9
2	Dr. Sumanth V.	2	2	2
3	Prof. Dhananjaya M K	1	2	5
4	Prof. Shruthi S		2	6
5	Prof. Nithin K			2
6	Prof. Ranjith V			1
7	Prof. Jyothi R		2	5
8	Prof. Vinutha B T	1		
9	Prof. Nethra MVO	1	1	3
10	Prof. Mala P			2
11	Prof. Prema C	1	1	1
12	Prof. Ravindra Prasad	1		
13	Prof. M S Patel	1		

Academic Research Details:

The details of academic research are shown in table 5.7.1(ii)

Table 5.7.1(ii): Academic Research Details

Sl No	Faculty Name	Title	Name of the Journal /Conference /publisher	ISSN / ISBN	Year
1	Dr. Manjunath R	Cloud Based Soil Moisture Measuring System Using IOT In Indian Agriculture	IJSRR	ISSN: 2279-543	2019
2	Dr. Manjunath R	Development of predictive model to improve Accuracy of medical Data Processing using Machine Learning Techniques	IJSRR	ISSN: 2279-543	2019
3	Dr. Manjunath R	An effective Big Data frame Work based on Farmer's Agriculture Context	IJSRR	ISSN: 2279-543	2019
4	Dr Sumanth V	Online Variational Interface for The Hierarchical Topics Detection	IJSRR	ISSN: 2279-543	2019

5	Dr Sumanth V	Efficient Secure Data sharing in Mobile cloud Environment using Light Weight Encryption	IJSRR	ISSN: 2279-543	2019
6	Prof. Dhananjaya M K	Autonomous Vehicle with Traffic Density Avoidance and Live Video Streaming using Artificial Intelligence with Embedded C	IJSRR	ISSN: 2279-543	2019
7	Prof. Dhananjaya M K	Agronomy Monitory Robot Using IoT Technology	IJSRR	ISSN: 2279-543	2019
8	Prof. Shruthi S	Comparative Performance Of Machine Learning and Deep Learning Algorithm on Imbalanced Handwritten Data	IJSRR	ISSN: 2279-543	2019
9	Prof. Shruthi S	Predicting Multiple Diseases using Machine Learning Techniques	IJSRR	ISSN: 2279-543	2019
10	Prof. Prema C	Blind navigation System using Hurdle Recognition	IJSRR	ISSN: 2279-543	2019
11	Prof. Jyothi R	SpideRR College Networking Application	IJSRR	ISSN: 2279-543	2019
12	Prof Nethra MVO	Smart Garbage Monitoring System using IOT	IJSRR	ISSN: 2279-543	2019
13	Prof Nethra MVO	Cloud based Android Application with NFC for Remote Access	IJSRR	ISSN: 2279-543	2019
14	Prof. Dhanajaya M K	Solar with IOT Enabled Charging Stations for Electrical Vehicle	Think Journal	ISSN-0971-1260	2019
15	Prof.Jyothi R	Retinal Prosthesis to Restore Sense of Vision Bionic Eye	Think Journal	ISSN-0971-1260	2019
16	Dr. Manjunath R	Predicting a Communication Capacity and Superficial Properties from Asynchronous Video Talk	Think Journal	ISSN-0971-1260	2019
17	Dr. Manjunath R	A Study on Applying Machine Learning approach to Forecast a Software Defect	Think Journal	ISSN-0971-1260	2019
18	Prof. Nethra MVO	DATA DEDUPLICATION WITH DYNAMIC MANAGEMENT IN CLOUD STORAGE	Think Journal	ISSN-0971-1260	2019
19	Dr. Manjunath R	Review of Mental Health Applications Using Data Science with ML Techniques	Think Journal	ISSN-0971-1260	2019
20	Dr. Sumanth V	Natural Language Processing by using Text Processing Algorithm	Think Journal	ISSN-0971-1260	2019
21	Prof. Shruthi S & Prof. Dhananjaya M K	Solar Powered Automatic Fire Fighting Robot Using Image Processing	Think Journal	ISSN-0971-1260	2019
22	Dr. Sumanth V	Cloud Computing Forensic Science	Think Journal	ISSN-0971-1260	2019
23	Dr. Sumanth V	Secure File sharing Mechanism with OTP Service in Big Data Environment	Think Journal	ISSN-0971-1260	2019
24	Prof. Shruthi S & Prof. Jyothi R	Light Weight Image Super-Resolution with Adaptive Deep Residual Network	Think Journal	ISSN-0971-1260	2019
25	Prof. Shruthi S	An efficient way of solving Bigdata using Hadoop & Map Reduce	Think Journal	ISSN-0971-1260	2019
26	Prof. Prema C	An Effective and Fine Grained Big Data access Control Scheme with Protection Policy	Think Journal	ISSN-0971-1260	2019
27	Prof. Shruthi S	A methodology for fire Detection using colour Pixel Classification	IJIRSET	ISSN:2319 -8753	2020
28	Prof. Dhananjaya M K	A methodology for fire Detection using colour Pixel Classification	IJIRSET	ISSN:2319 -8753	2020
29	Dr. Manjunath R	A synchronous video talk with master used to predict correspondence capacity and perceived character properties	IJIRSET	ISSN :2319 -8753	2020
30	Prof. Jyothi R	Gesture Vocalize Using Smart Glove for Deaf and Mute People using Internet of Things	IJIRSET	ISSN :2319-8753	2020
31	Prof. Nithin K	Smart Glass for Visually Impaired	IJIRSET	ISSN :2319-8753	2020
32	Prof. Shruthi S	Image Processing Based Solar Powered Fire Detection and Extirpation Robot	IJIRSET	ISSN :2319-8753	2020
33	Prof Jyothi R	GPS based Soldier Tracking and Health Indication System	IJIRSET	ISSN :2319-8753	2020
34	Prof. Ranjith V	Phishing Detection using Improved RCNN Model with Multilevel Vectors and Attention Mechanism	IJIRSET	ISSN :2319-8753	2020
35	Prof. Dhananjaya M K	Automatic Gas Leakage Detection and Booking Based on Gas Level Using IOT	IJIRSET	ISSN :2319-8753	2020
36	Dr. Manjunath R	Prediction of Software Defect Using Supervised Machine Learning Practices	IJIRSET	ISSN :2319-8753	2020

37	Prof. Mala.P	Robust Early Detection Mechanism for IoT enabled Landslide Monitoring using Lora Technology	IJIRSET	ISSN :2319-8753	2020
38	Dr. Manjunath R	A Study on Machine Learning Algorithms, LDTM and Data Science Model for Mental Health Application	IJIRSET	ISSN :2320-9801	2020
39	Prof. Jyothi.R	Bionic Eye: Retinal Prosthesis to Restore Eyesight	IJIRSET	ISSN :2320-9801	2020
40	Prof. Mala.P	Enhanced BCI Intelligent Wheelchair System Based on Alpha Wave and SSVEP EEG Signals	IJIRSET	ISSN :2320-9801	2020
41	Prof. Dhanajaya M K	Charging Station for E-Vehicle using Solar with IOT for Multiple Users	IJIRSET	ISSN :2320-9801	2020
42	Prof. Nithin K	Tracking and Warning System for Fishermen Using IOT	ISSN :2320-9801	ISSN :2320-9801	2020
43	Dr. Manjunath R	Detection of Plant Leaf Disease by Using Image Processing Approaches	IJIRSET	ISSN :2320-9801	2020
44	Prof. Jyothi.R	Wireless Communication-UAVs	IJIRSET	ISSN :2320-9801	2020
45	Prof. Shruthi.S	Adaptive Deep Residual Network for single Image Super-Resolution	IJIRSET	ISSN :2320-9801	2020
46	Dr Sumanth V	A Possiblitic clustering based biased Bayesian relevance feedback model for web usage recommendations	IJET	ISSN: 4024-4029	2018
47	Dr Sumanth V	A Proficient Web Recommender system using Hybrid Possibilistic Fuzzy clustering and Bayesian Model Approach	IJIES	ISSN: 1741-1076	2018
48	Prof. Dhananjaya M K	Agronomy monitory robot using IOT Technology	IJSR	ISSN :2279-543	2018
49	Prof. Dhananjaya M K	Autonomous Vehicle with Traffic density Avoidance and Live video streaming using Artificial intelligence with embedded C	IJSR	ISSN :2279-543	2018
50	Prof. Prema C	Blind Navigation System using Hurdle Recognition	IJSR	ISSN :2279-543	2018
51	Prof Nethra MVO	Smart Garbage Monitoring system using IoT	IJSR	ISSN :2279-543	2018
52	Prof. Shruthi S	Comparative Comparative performance of machine learning and deep learning algorithms on imbalanced handwritten data	IJERCSE	ISSN :2279-543	2018
53	Prof. Shruthi S	Predicting multiple diseases using Machine learning Technique	IJSRR	ISSN :2279-543	2018
54	Prof. Jyothi R	Spide RR college networking Application	IJSRR	ISSN :2279-543	2018
55	Prof. Ravindra Prasad	A survey on cold start product Recommendation system by using micro blogging information	IJIRCCE	ISSN 2320 -9801	2017
56	Dr Sumanth V	Analyzing Tweets for Real Time Event Detection and Development of Earthquake Reporting System	IJERCSE	ISSN 2394 -2320	2017
57	Prof. Dhananjaya M K	Eliminating Duplicate Data in cloud Storage with Dynamic Ownership and Security	IJERCSE	ISSN 2394 -2320	2017
58	Prof. Vinutha B T	Plant identification System using Leaf Feature Plant	IJERCSE	ISSN 2394 -2320	2017
59	Prof. Nethra MVO	Cyberbullying Detection in Lights of Semantic Enhanced Marginalized Denoising Auto Encoder	IFERP	ISBN – 978-81-932966-7-7	2017
60	Prof. M S Patel	An improved handwritten word Recognition rate of south indian kannada words using better feature Extraction Approach	Springer	https://link.springer.com/chapter/10.1007/978-3-319-12012-6_61	2017
61	Dr. Sumanth V	An Optimal Web usage mining technique for Personalizing the web directory with the help of possibilistic fuzzy C-means and Relevance feedback algorithm	IJCTA	ISSN: 0974-5572	2017

Ph.D Guided/ Ph.D Awarded Details:

The below table 5.7.1(iii) shows the details of Ph.D awarded and table 5.7.1(iv) shows the details of Ph.D guiding

Table 5.7.1(iii): Ph.D Awarded Details

SL. No.	Name of Faculty	Details of Faculty	University	Title of Research	Year of Completion
1	Dr. Manjuanth R	Professor, CSE RRIT Bangalore	Tumkur University	Study on data mining algorithms to mine multimedia data	2019

| 2 | Dr. M S Patel | Associate Professor, CSE, RRIT Bangalore | VTU, Belgaum | InHaWoR : Intelligent Handwritten Word Recognition | 2018 |

Table 5.7.1(iv): Ph.D Guiding Details

SL. No.	Name of Guide	Research Scholar	University	Domain & Title
1	Dr. Manjunath R	Shruthi S Assistant Professor, CSE Department, RRIT Bangalore	VTU, Belgaum	Domain: Machine learning Title: A Conceptual Frame Work to Find Authenticity of Multimedia Data Using Machine Learning Techniques

5.7.2 Sponsored Research (5)   Institute Marks :

2019-20 (CAYm1)

Project Title	Duration	Funding Agency	Amount

2018-19 (CAYm2)

Project Title	Duration	Funding Agency	Amount

2017-18 (CAYm3)

Project Title	Duration	Funding Agency	Amount

Cumulative Amount(X + Y + Z) =

5.7.3 Development Activities (10)   Institute Marks : 6.00

A. Product Development

Students & faculties are encouraged to do in-house projects that lead to product development.

The list of products developed by the students and faculties are given in below table 5.7.3(i).

Table 5.7.3(i) Product Development Details

Sl. No.	Product Title	Product Description	Students Name/ Faculty Name	Product/Patent No
1	A web based system for breast cancer prediction using XGBoost classifier	Machine learning algorithms implemented for detection of breast cancer	Dr. Manjunath R, Mr. Balaraju G,	Indian Patent Filed & Published Patent No. 202121039140
2	Novel technique for autonomous report generation for management of E-financial governance	Novel technique was used for generating the E-financial governance	Dr. Manjunath R	Indian Patent Filed & Published Patent No. 202141039092
3	Turning point Application	Mobile application which had links to question paper, syllabus copy.	Mr. Satish	Playstore Link: https://play.google.com/store/apps/details?id=com.rrinstitute.turningpoint
4	Artificial Intelligence Based Smart Touch Less Medicine Dispensing System for Pharma Field	AI was used to treat patients during the pandemic time.	Dr. Manjunath R	Indian Patent Filed & Published Patent No. 202141038793
5	AWS- Cloud Data advanced performance improved using Deep learning Programming	Advancement of cloud data by using Deep learning.	Dr. Manjunath R	Australian Patent Filed & Published Patent No. 2021103769

B. Research Laboratories

The table 5.7.3(ii) shows the research center details, table 5.7.3(iii) shows the research scholar details and table 5.7.3(iv) shows the research laboratories details.

Table 5.7.3(ii) Research Centre Details

University	Year of Recognition	Reference number
Visvesvaraya technological university, Belgavi	2020	VTU/ACA-LIC/2020-21/S0/2091/18

Table 5.7.3(iii): Research Scholar Details

Sl. No.	Guide Name	Student Name	Domain	Year of Registration	University	Status of Research work
1	Dr. Manjunath R	Shruthi S	Machine learning	2021-22	VTU, Belgavi	Applied for Registration in year 2021-22
2	Dr. Amit Kumar Chaturvedi	Dhananjaya M K	Cloud Computing	2020-21	Bhagawant University, Ajmer	Course work completed

Table 5.7.3(iv) Research Centre Details

C. Instructional Materials

The table 5.7.3(v) shows the Instructional Materials used in the department.

Table 5.7.3(v): Instructional Materials

Sl. No.	Details
1	Lab Manuals
2	Assignments
3	Ppts
4	Mini/Projects
5	Lab Description Charts
6	Lecture Notes
7	Blog Spots

D. Working models/charts/monograms, etc.

The table 5.7.3(vi) shows the working models/charts/monograms developed in the department.

Table 5.7.3(vi) Models/Charts/monograms models developed

Sl. No.	Product Title	Product Description	Students Name/ Faculty Name	Year
1	Autonomous Gas leakage Detection and booking based on gas Level using IOT	Automatic booking of new LPG by auto dialing of gas booking number and by this we prevent pre-booking and late booking.	Sahana T Kannan S Arjun N Vaishnavi N Dhananjaya M K	2019-20
2	Agronomy Monitoring Robot Using IOT Technology	Agriculture robot known as AGRIBOT. This robotic vehicle is an agricultural machine of a considerable power and great soil cleaning capacity.	Prerana D Vasuki E M Prathiba M Dhanjaya M K	2018-19
3	Securing Cloud Data Under Key Exposure	To secure a cloud data, the data owner must encrypt the file or the document before he uploads it to the cloud.	Lavanya M R Mamtha C G Usha Pandith R Poonam Kumari Vinutha B T	2017-18

Charts: Subject oriented charts are displayed in laboratories

- C Programming
- Data Structure and algorithm
- Analog and Digital Electronics
- Database Management Systems
- Computer Network
- Web Programming
- System Software and Compiler Design

5.7.4 Consultancy(from Industry) (5)   Institute Marks :

2019-20 (CAYm1)

Project Title	Duration	Funding Agency	Amount

2018-19 (CAYm2)

Project Title	Duration	Funding Agency	Amount

2017-18 (CAYm3)

Project Title	Duration	Funding Agency	Amount

Cumulative Amount(X + Y + Z) =

5.8 Faculty Performance Appraisal and Development System (FPADS) (30)   Total Marks 25.00

Institute Marks : 25.00

- Faculty Performance Appraisal is evaluated by collecting the self- appraisal forms, from each faculty in which they need to give the details of academic progress, research progress and other contributions for their self-renewal to cope up with changes in technology.
- Based on self- appraisal evaluation, the faculty will be recommend for the awards and annual increments..
- The following parameters are used to evaluate the faculty performance appraisal which are shown in below table 5.8(i).

Table 5.8(i) Parameters used for faculty performance appraisal

Sl. No	Parameters	Evidences
1.	**RESULTS:** a. Subject Results	Consider Subjects (Theory & Practical) of which results are announced in the duration mentioned for appraisal
	b. Mentorship Results	Result sheet of each Student under respective Proctor System

2.	Guiding Students Projects/Research Students (Mention Not Applicable for c & d, for UG College)
	
	  a. UG Projects (Sponsored)
	  b. UG Project (Non-Sponsored)
	  c. PG Projects (Sponsored)
	  d. PG Projects(Non-Sponsored)
		• Sponsored Project
		• Acceptance Letter by funding Agency
		• Project Competition Letter
		• Non-sponsored:
		• First copy of Project, with Title, Student name and Faculty name
		• Group Project will be single count

3.	Number of Students guided for presentation of Papers / Posters/ Internship (not covered in Point.3)	• Certificate on presentation by organizing committee • Certificates of events organised by R R Institutions will not be considered • Certificates of Internship
4.	Student Evaluation (Total of all subjects and Average X Ten Times)	• Feedback sent by QAC recently to be considered • Students Appraisal (feedback) scores <u>Total of all subjects</u> X 10 • Number of subjects
5.	Number of Research activity (Papers Published) Note: (1st Author: full points, 2nd Author: points allotted X .5, 3rd Author: points allotted X .25)- • International Journals (ISSN) • National Journals (ISSN) • International Proceedings (ISBN) • National Proceedings (ISBN) • Books Authors (ISBN) • Book Edited (ISBN)	• **Journal:** • First Sheet of the paper displaying Title, Author Name, Journal Name and ISSN compulsory • **Proceedings:** • Index sheet mentioning Title and Author Name • Front & back cover page of proceeding showing ISBN number • **Book:** Front and back cover displaying Title, Author's name and RR Institution affiliation and ISBN number
6.	MOU signed / Centre Of Excellence Established	• MOU signed copies / Certificate of COE from companies

7.	Invited/Expert Lecture:
	
	  a. At Industry
	  b. Colleges (outside RR Institutions)
	  c. At RR Institutions (not in the respective college)
		• Appreciation Letter / Certificate from Host Organisation

8.	Membership of Professional Societies: a. Any Life member b. New Membership taken during the year	• Memberships taken in Academic Year 2018-19 will be considered • Proof of Registration of membership with date
9.	University Assignments: a. Member of Academic Council b. Members of BOS / BOE c. External Examiner / External DCS d. Question Paper setting	• Letter from University for allotted work
10.	Co-ordinator for organizing Conference/Seminar/ Work Shop/QIP/FDP Etc	• Invitation copies displaying as convenor • Certificates given by QAC for organizing events • Multiple Coordinators for single event will not be considered • Only main Coordinator will be considered
11.	Attending Conference/Seminar/ Work Shop/QIP/FDP Etc	• Certificates of the events with faculty and college name
12.	Awards: a. State level/ Regional Level b. National Level c. International Level	• Certificates of Awards
13.	Additional Responsibilities (Given by Principal/Management)	• Letter from College registered allotted work • Events organising will not be considered here
14.	Committee Incharges	• Members of committee • Committee should be functional / conducting meetings / events etc.
15.	Any other Contribution for Image building of College (not mentioned in any above)	• Proofs for the same • Considered which is not added in questions 1-14

• Format of appraisal form HOD with Ph.D/ Professors /Associate Professors /Ph.D is shown in figure 5.8(a)

Figure 5.8(a) Sample format of appraisal form HOD with Ph.D/ Professors /Associate Professors /Ph.D

- Format of appraisal form Teacher/HOD without P.hD is shown in figure 5.8(b)

6. MOU signed / Centre Of Excellence Established	200 Per Work	___ X 200=
7. Invited/Expert Lecture:		
a. At Industry	300 Per Lecture	___ X 300=
b. Colleges (outside RR Institutions)	200 Per Lecture	___ X 200=
c. At RR Institutions (not in		
d. the respective college)	100 Per Lecture	___ X 100=
8. Membership of Professional Societies:		
a. Any Life member	100 Per Unit	___ X 100=
b. New Membership taken during the year	200 Per Unit	___ X 200=
9. University / Assignments:		
a. Member of Academic Council	300 Per Unit	___ X 300=
b. Members of BOS / BOE	200 Per Unit	___ X 200=
c. External Examiner / External DCS	200 Per Unit	___ X 200=
d. Question Paper setting	100 Per Unit	___ X 100=
10. Main Co-ordinator for organizing Conference /Seminar/ Work Shop/QIP/FDP Etc	300 Per event	___ X 300=
11. Attending Conference/Seminar/ Work Shop/ QIP/FDP Etc	100 Per Unit	___ X 100=
12. Awards		
a. State level/ Regional Level/ R.R.Institutions	100 per award	___ X 100=
b. National Level	200 per award	___ X 200=
c. International Level	300 per award	___ X 300=
13. Additional Responsibilities (Given by Principal/Management)	100 Per Unit	___ X 100=
14. Committee Incharges (not mentioned in 13)	100 per Com.	___ X 100=
15. Any other Contribution for Image building of College (not mentioned in 13, 14)	200 Per Activity	___ X 200=

- -

Scored Points: Total Scores:

SIGNATURE OF STAFF   SIGNATURE OF HOD

PRINCIPAL

Verified by: Signature

QAC-SATHP-Vol-1-7/11/19   Page 2 of 4

Figure 5.8(b) Sample format of appraisal form Teacher/HOD without P.hD

- Sample evidence of teacher without Ph.Ds is shown in figure 5.8(c)

R. R. Institutions

Chikkabanavara Bangalore

Ph.D. I Engineering I Architecture. I Nursing I Pharmacy I MBA I Allied Health Sciences
Polytechnic I Education I Degree I PUC

27 YEARS OF ACADEMIC EXCELLENCE

Since 1990

Quality Assurance Cell (QAC)

(Teachers/HODs without Ph.D.s)

Self-Appraisal Form (from August 01, 2019 – July 31, 2020)

Name: Shruthi S   College: **RRIT**

Designation/ Department: Asst. Prof / CSE

1. **Results:**

a) Subject Results -

Sl. No.	Subject Code	Result (%)	Score Calculation: (Result % X10)	Total
a.	15CS551	75	75X 10= 750	750
b.	15CS73	98	98X 10= 980	980
c.	15CS176	95	95X 10= 950	950
d.	17CS551	100	100X 10= 1000	1000
e.	17CS651		X 10=	
f.	15 CS82		X 10=	
g.	18CPL27		X 10=	
h.			X 10=	3680

b) Mentorship Results –   Total of each Student Result   X 10 = 61·84 X10

Number of Students = 618.

2. Guiding Students Projects/Research Students (Mention Not Applicable for c & d, for UG College)

a.	UG Projects (Sponsored)	300 Per Project	1 X 300= 300
b.	UG Project (Non-Sponsored) Internship	100 Per Project	4 Students X 100 = 400
c.	PG Projects (Sponsored)	500 Per Project	X 500=
d.	PG Projects (Non-Sponsored)	300 Per Project	X 300=

3. Number of Students guided for
Presentation of Papers / Posters
(not covered in Point 2)   200 Per Event

4. Student Evaluation (Total of all subjects and Average X Ten Times):
COHD: 91·09 & MLT : 91·63 , MLT lab = 92·03 Avg= 91·4 } 85·05 X10
DM : 74·70 & BDA : 82·42 Avg = 78·71   = 850

5. Number of Research activity (Papers Published)

a.	International Journals (ISSN)	600 Per Paper	3 X 600= 1800
b.	National Journals (ISSN)	300 Per Paper	X 300=
c.	International Proceedings (ISBN)	400 Per Paper	X 400=
d.	National Proceedings (ISBN)	200 Per Paper	X 200=
e.	Books Authors (ISBN)	600 Per Paper	X 600=
f.	Book Edited (ISBN)	400 Per Paper	X 400=

6. MOU signed / Centre Of Excellence
Established   200 Per Work   X 200=

7. Invited/Expert Lecture:
   a. At Industry   300 Per Lecture   X 300=
   b. Colleges (outside RR
      Institutions)   200 Per Lecture   X 200=
   c. At RR Institutions (not in
   d. the respective college)   100 Per Lecture   X 100=

8. Membership of Professional Societies:
   a. Any Life member   100 Per Unit   2 X 100= 200
   b. New Membership taken
      during the year   200 Per Unit   1 X 200= 200

9. University / Assignments:
   a. Member of Academic Council   300 Per Unit   X 300=
   b. Members of BOS / BOE   200 Per Unit   X 200=
   c. External Examiner / External
      DCS   200 Per Unit   X 200=
   d. Question Paper setting   100 Per Unit   X 100

10. Main Co-ordinator for organizing Conference
/Seminar/ Work Shop/QIP/FDP Etc   300 Per event   27 X 300= 8100

11. Attending Conference/Seminar/ Work Shop/
QIP/FDP Etc   100 Per Unit   64 X 100= 6400

12. Awards
    a. State level/ Regional Level/
       R.R.Institutions   100 per award   X 100=
    b. National Level   200 per award   X 200=
    c. International Level   300 per award   X 300=

13. Additional Responsibilities (Given by
Principal/Management)   100 Per Unit   9 X 100= 900
Class Teacher, Disciplinary Committee, Lab Incharge,
Criteria 1 Incharge, NACC File Incharge, Time Table, Placement, Library, Gang Alar

14. Committee Incharges (not mentioned in 13) Cultural Committee head x100= 100

15. Any other Contribution for Image building
of College (not mentioned in 13, 14)   200 Per Activity   2 X 200= 200

Scored Points: Total Scores 23,748

SIGNATURE OF STAFF   SIGNATURE OF HOD

PRINCIPAL

Verified by:

Figure 5.8(c): Sample evidence of teacher without Ph.D

5.9 Visiting/Adjunct/Emeritus Faculty etc. (10)   Total Marks 0.00

Sl. No.	Faculty Name
1	MANORANJAN H P
2	AMULYA T

6 FACILITIES AND TECHNICAL SUPPORT (80)   Total Marks 69.00

6.1 Adequate and well equipped laboratories, and technical manpower (30)

Total Marks 25.00

Institute Marks : 25.00

Sr. No	Name of the Laboratory	Number of students per set up(Batch Size)	Name of the Important Equipment	Weekly utilization status(all the courses for which the lab is utilized)	Technical Manpower Support		
					Name of the Technical staff	Designation	Qualification
1	Computer Programming Laboratory	20	CPU: Intel Motherboard, Dual core processor, 4GB RAM, 500 GB Hard disk, 15" Monitor Projector Windows 7 starter C++/ Turbo C MS office	9 hours	Swetha H C	Programmer	B.E
2	Data structure Laboratory and Design and Analysis of Algorithm Laboratory	20	CPU: Intel core i3 7100 @ 3.9 Ghz, 4 GB RAM, 1TB hard disk, 19.5" dell monitor Windows 7 starter Turbo C Python Anaconda-3.5 MS office-10	9 hours	Santhosh karnth	Instructor	MSc
3	Analog and Digital Electronics Laboratory	20	DC- Regulated power supply. Function generator. Decade resistance box. Decade induction box. Decade capacitance box. Op-Amp fixed power supply Digital multimeter Linear IC kit Digital IC trainer kit	9 hours	Pavan H	Instructor	Diploma
4	Microcontroller Laboratory	20	Advanced trainer kit ARM7 architecture using LPC2148 CPU: Intel dual core processor, 4 GB RAM, 500 GB HDD, 19" monitor, KEIL-4	9 hours	Kavya Gururaj Rao	Instructor	MSc
5	Computer Network Laboratory / System Software and Operating System Laboratory	20	CPU: Intel Pentium dual core @ 3.20 Ghz, 4GB RAM, 500 GB HDD, 15" chirag monitor Feroda NCTUNS-4.0 N8-2 simulator tool, Turbo C	9 hours	Mamatha K B	Instructor	Diploma
6	DBMS Laboratory / Computer Graphics Laboratory	20	CPU: Intel Pentium dual core @ 3.20 Ghz, 4GB RAM, 500 GB HDD, 15" chirag monitor Optiplex 980 i5 processor @ 3.2 Ghz, 4 GB RAM, 250 GB HDD, 15" monitor. SQL Oracle-11G Turbo C	9 hours	Siddlingappa	Instructor	Diploma
7	Machine Learning Laboratory/ Project Laboratory	20	Dell optiplex 3050 MT, CPU: i3 7100 @ 3.9 Ghz, 4 GB RAM, 1TB HDD, 19.5" monitor, Turbo C, Python, Anaconda-3.5	9 hours	Sathya Narayanan V	Programmer	BSc
8	Web Technology Lab/ Project Laboratory	20	CPU: Intel Pentium dual core @ 3.20 Ghz, 4GB RAM, 500 GB HDD, 15" chirag monitor Wamp server, Xamp server, Feroda-8/14	9 hours	Swetha G N	Instructor	Diploma

6.2 Additional facilities created for improving the quality of learning experience in laboratories (25)

Total Marks 20.00

Institute Marks : 20.00

Sr. No	Facility Name	Details	Reason(s) for creating facility	Utilization	Areas in which students are expected to have enhanced learning	Relevance to POs/PSOs
1	R & D Center	It is equipped with high Configured systems. And has access to various other facilities This helps the research work.	Support R & D Activities. Encourage students to purse research and continuous Learning.	It is utilized by faculties, research Scholars & UG students.	IOT, Cloud computing, Computer networks, Data mining, Image processing, Big Data	PO1, PO2, PO3, PO4, PO5, PO12 PSO2
2	Internet of Things Lab	It is equipped with Raspberry pi kit, Arduino kit Customized CDAC kit	To explore in the field of Internet of Things and conduct Experiments.	Faculties, Research Scholars & UG students	Aurdino IDE programming, Python programming, Circuit building.	PO2, PO3, PO4, PO5, PO9, Po12, PSO2
3	Software available	Sublime text XAMP, WAMP KEIL, NS2, NCTUNS Anaconda LaTeX, Visual Studio	Simplify the Programming Techniques	It is used by the Faculties, Research Scholars & UG students to conduct various experiments	Web programming, ARM Processor programming, Assembly programming, Simulator programming, Python and R programming languages, Project work Report writing	PO3, PO5 PSO1, PSO2
4	Language Lab	It is equipped with Computer Systems, Internet Connection, Projector, Software, Head Set and Teaching Board	To Teach Lessoning, Speaking, Reading & Writing Skills (LSRW)	UG Students	English & Communication Skills	PO10, PO12
5	Internet Lab	Equipped with Computer Systems, LAN connectivity & Ethernet/WiFi	For faculties & students to enhance their knowledge	Faculties, Research Scholars & UG students. It is available throughout the year for utilization	Inculcate self-learning Skills and communication skills	PO10, PO12, PSO1
6	Digital Library	Equipped with computer systems, E-Resources packages available, IEEE-IEL Online, Springer, EBooks/ Test Preparation Platform, Proquest, Knimbus, Kopykitab, Taylor & Francis, Asian Age International, NDL of India, Institutional Repository, VTU-E-Consortium	To help students to enhance their knowledge with latest trends and updates in the field of Technology	It is available throughout the year. Utilized by all the research scholars, students and faculties.	Inculcate self-learning skills	PO1, PO2, PO12, PSO1
7	Edusat Lab	Equipped with Systems, A View Software LCD Projector, Audio System & Recording Option	To support students to gain academic knowledge through E-Learning	Faculties & UG Students	Self Learning	PO1, PO2, PO12, PSO1
8	Access to e-learning and Journals	E-Resources packages available, IEEE-IEL Online, Springer, Taylor & Francis, Proquest Technology, Knimbus (10000+ E-journals), Kopykitab EBooks/Test Preparation platform, VTU-E-Consortium	To help students to enhance their knowledge with latest trends and updates in the field of technology	It is available throughout the year for utilization	Students and staff can access to e-learning and Journal books, to have a better understanding of subjects this helps to carry out project work smoothly.	PO1, PO2, PO12, PSO2
9	Virtual Lab	To provide remote-access to simulation-based Labs in various disciplines of Science and Engineering.	To provide remote-access to simulation-based Labs in various disciplines of Science and Engineering	To enthuse students to conduct experiments by arousing their curiosity. This would help them in learning basic and advanced concepts through remote experimentation.	Machine Learning,IOT, Cloud computing, Computer networks, Data mining, Image processing	PO6, PO7, PO9, PO11, PO12
10	D-Book	D-Bookstore enables you to seek out precise context specific content	A teaching faculty of an institution uploads some content on a topic or subject through the D-Bookstore deployed in the institution.	It is utilized by the students for their Academic purpose.	Students and staff can access to D-Book store , to have a better understanding of subjects.	PO1,PO2,PO3,PO4,PO5,PO6,PO12

6.3 Laboratories: Maintenance and overall ambiance (10)   Total Marks 10.00

Institute Marks : 10.00

Maintenance of Laboratory Equipment's:

Maintenance of laboratory equipment includes computer system, CRO, digital kit and Function generator.

Maintenance is done in two ways:

1. **Regular maintenance:**

- Regular maintenance of computer system is done by deleting unnecessary files and formatting the system.
- As per requirement minor repairs are carried out by the lab assistant & faculty member.
- Major repairs are outsourced by following the procedure of the institute.

2. **On call maintenance:**

- On call maintenance is done in case of major issue or breakdown of the equipment.
- In case of any major issue or breakdown of the equipment, a complaint is raised from the department to System administration department.
- If issue is not resolved by System admin department further based on the recommendation the new equipment shall be procured.

Overall Ambience:

- All laboratories have a seating capacity as per the requirements.
- Laboratories are equipped with LCD projectors, white screen and white board. The boards are installed in places with proper lighting.
- The laboratories are spacious, well ventilated and well furnished.
- The laboratories are provided with un-interrupted power supply.
- House Keeping will be done regularly.
- The cleanliness of the laboratory is maintained.
- The overall ambience of the laboratories is serene and provide excellent learning environment.

6.4 Project laboratories (5)

Total Marks 4.00
Institute Marks : 4.00

Research plays an important role in the educational experience and provides practical skills for future employment of engineering students. The objective of this lab is to motivate and encourage students to do in-house project. This lab provides a place where the students can make & assemble their mini and major projects while working in groups.

Management took initiation and developed R&D center in the Department of Computer Science & Engineering. At this center, student can design, implement advanced solutions, thus preparing students for job readiness, lifelong problem solving, and leadership in the industry.

The table 6.4(i) shows the facilities availble and utilization of project lab.

Table 6.4(i): Facilities availble and utilization of project lab

Sl. No	Software Available	Utilization
1	Back End-SQL, MySql, MS Sql 2005 Front End – Java Net Beans / Eclipse, PHP, Open GL	DBMS Mini Project – V Semester, CG Mini Project – VI Semester
2	Web Servers : XAMPP, Tomcat Server	Database related projects for Final year Students
3	Python, HTML, CSS, Java script, PHP, Java- Net Beans, Eclipse, NS2, NS3,Zamp server	Application and research oriented projects for final year students.

6.5 Safety measures in laboratories (10)

Total Marks 10.00
Institute Marks : 10.00

Sr. No	Laboratory Name	Safety Measures
1	Computer Programming Laboratory	● Fire Extinguisher ● Do's and Dont's board ● First aid box ● Antivirus ● Centralized power backup ● CCTV
2	Data structure Laboratory and Design and Analysis of Algorithm Laboratory	● Fire Extinguisher ● Do's and Dont's board ● First aid box ● Antivirus ● Centralized power backup ● CCTV
3	Computer Network Laboratory / System Software and Operating System Laboratory	● Fire Extinguisher ● Do's and Dont's board ● First aid box ● Antivirus ● Centralized power backup ● CCTV
4	DBMS Laboratory / Computer Graphics Laboratory	● Fire Extinguisher ● Do's and Dont's board ● First aid box ● Antivirus ● Centralized power backup ● CCTV
5	Machine Learning Laboratory/ Project Laboratory	● Fire Extinguisher ● Do's and Dont's board ● First aid box ● Antivirus ● Centralized power backup ● CCTV
6	Web Technology Lab/ Project Laboratory	● Fire Extinguisher ● Do's and Dont's board ● First aid box ● Antivirus ● Centralized power backup ● CCTV
7	Analog and Digital Electronics Laboratory	● Fire Extinguisher ● Do's and Dont's board ● First aid box ● Antivirus ● Centralized power backup ● CCTV
8	Microcontroller Laboratory	● Fire Extinguisher ● Do's and Dont's board ● First aid box ● Antivirus ● Centralized power backup ● CCTV

7 CONTINUOUS IMPROVEMENT (50)

Total Marks 40.00

7.1 Actions taken based on the results of evaluation of each of the POs & PSOs (20)

Total Marks 15.00

Institute Marks : 15.00

POs Attainment Levels and Actions for Improvement- (2019-20)

POs	Target Level	Attainment Level	Observations
PO 1 : Engineering Knowledge			
PO 1	96.23%	95.33%	Target Achieved
Action 1: Program curriculum, pedagogical methods are continued to maintain the consistency. Action 2: Practical approach of teaching programming to be adapted in the subjects.			
PO 2 : Problem Analysis			
PO 2	93.01%	93%	Target Achieved
Action 1: Expert talks are organized on Cloud and other domains.. Action2 : More problems will be given for practice in the classes.			
PO 3 : Design/development of Solutions			
PO 3	90.32%	91%	Target Achieved
Action 1:Conducted workshops on Data Science and Importance of Programming. Action 2: More assembly level programming to be taught in classes. Action 3: Students are motivated to carry out Mini project in Various Domain.			
PO 4 : Conduct Investigations of Complex Problems			
PO 4	93%	84.33%	Target not Achieved
Action 1: Guest lectures and hands on sessions are conducted to improve knowledge to analyze Problems. Action 2: Conducted expert talk on Cyber Security and other areas of IT. Action 3: Students are encouraged to prepare the papers and present in conferences/Journals			
PO 5 : Modern Tool Usage			
PO 5	78.61%	80%	Target Achieved
Action 1: For few subjects modern tools are adopted and additional hands on sessions are conducted. Action 2: Conducted workshop on python and Certification program were conducted on Machine learning.			
PO 6 : The Engineer and Society			
PO 6	59.05%	67.33%	Target Achieved
Action 1:Students are encouraged to take projects addressing the needs of health, safety and social concerns regarding engineering practices in real life Action 2:Awareness on societal, health, safety, legal, cultural issues and the consequent responsibilities relevant to the professional engineering practice would be created among students.			
PO 7 : Environment and Sustainability			
PO 7	50%	61%	Target Achieved
Action 1: Students are encouraged to do the internships in industries carrying out societal technical projects. Action 2: Encouraged students to address environmental issues in their projects.			
PO 8 : Ethics			
PO 8	59.25%	71%	Target Achieved
Action1:Arranging talk from competent professionals to create awareness among students about professional ethics. Action2:Students were encouraged to carry out projects on their own by following IEEE code of ethics.			
PO 9 : Individual and Team Work			
PO 9	79.01%	84%	Target Achieved
Action 1:Students are being encouraged to work individually and in a group through project works, paper presentations, mini projects, technical paper presentations. Action 2:: In order to inculcate the ability to work in a multidisciplinary group, more students would be encouraged to take up interdisciplinary project work.			
PO 10 : Communication			
PO 10	92.33%	77%	Target not Achieved
Action 1: Events on communicative English, Soft skills, and Technical seminar are adopted in the program to enhance the communicative skills of students. Action 2: Guidance is provided in writing Project, Industrial Training and Technical seminar reports. Action 3: Ability to present and convey the latest engineering trends.			
PO 11 : Project Management and Finance			
PO 11	75.67%	78.33%	Target Achieved
Action 1: Awareness was created among the student regarding the management principals and managing projects by the faculties.			
PO 12 : Life-long Learning			
PO 12	71.7%	74.66%	Target Achieved
Action 1:Students would be motivated for independent learning by introducing self-Learning component in selected courses in the program curriculum			

PSOs Attainment Levels and Actions for Improvement- (2019-20)

PSOs	Target Level	Attainment Level	Observations

PSO 1 : Apply the software practices, principals to design and analyse the complex computer based system.

PSO 1	82.37%	84%	Target Achieved

Action 1:Additional classes to be conducted to introduce the software practices and principals in few subjects. Action 2: The students were encouraged to introduce the software practices and principals in Projects.

PSO 2 : Design, implement and validate system software and application software to the various societal needs.

PSO 2	55.67%	67%	Target Achieved

Action 1: Workshops and SDP's are conducted to help the students to apply more knowledge to implement and validate the software. Action 2: For further improvements, Students are sent for internship in Machine Learning, IoT, Data science & Big Data.

7.2 Academic Audit and actions taken thereof during the period of Assessment (10)

Total Marks 10.00

Institute Marks : 10.00

A. Course File Evaluation

Course files are prepared by faculty members before the semester starts. The academic review committee consisting of HOD and few of departmental senior faculty members performs audit of course files. The comments of the committee are conveyed as feedback to the faculty member to include missing content in course file. This audit ensures the quality deliverables to the students. The Table 7.2(i) shows the course file contents.

Table 7.2(i) Course file contents

1.	Vision, Mission of Institution & Department
2.	Calendar of events - University
3.	Calendar of Events – College, Department
4.	Attendance Register
5.	Class Time Table
6.	Individual Time Table
7.	Syllabus Copy with text book, reference books
8.	Student List
9.	Toppers list & Below average Students list
10.	Proctor's list and Proctor student data
11.	Course Objectives & Course Outcomes & Programme Outcome
12.	Lesson Plan
13.	Teaching Diary
14.	University Question Papers
15.	Question Bank – Module wise for all five modules
16.	Assignment Questions – Module wise for all five modules
17.	Internal Test Question Papers & Scheme
18.	Class Test
19.	Lecturer Notes, Copies of PPT & Other Learning Materials
20.	Internal Test Marks List
21.	Subject Results & Student Feed back

B. Audit on Department File

The academic committee verifies the maintenance of department documents and provides feedback to head of the department,. This ensures the maintenance of documentary evidence at department level. The list of department files audited by committee is listed below -

1. Subject Allocation File
2. Project File
3. Seminar File
4. Time Table
5. Lesson plan
6. CO-PO mapping of the Previous Semester
7. Department Profile

8. Staff Meeting File
9. Circular File
10. Purchase File and Equipment Service Register
11. PTM File
12. Proctor File
13. Department Library File
14. Publication File
15. Collaboration with MOU
16. Conference/Seminar / Workshop
17. Stock register
18. Result Analysis File
19. Department Placement File
20. Course File
21. Personal File (Teaching and Non-Teaching)
22. Feedback Analysis
23. Remedial measure for the weaker student
24. CO-PO Calculation

Action taken by the faculty members:

Faculty members incorporate changes suggested by the academic committee.

7.3 Improvement in Placement, Higher Studies and Entrepreneurship (10)

Total Marks 7.00

Institute Marks : 7.00

A. Placement Details

The Table 7.3(i) shows the placement data with packages.

Table 7.3(i): Placement Data with Packages

Year	No of Students for final examination	No of students placed	Salary packages INR in Lakhs	
			MIN	Max
CAYm1 2019-20	23	23(100%)	3.00 - 4.00	
CAYm2 2018-19	46	34(74%)	1.2 - 14.25	
CAYm3 2017-18	27	22(81%)	3.00 - 18.00	

B. Higher Studies Details

The Table 7.3(ii) shows the students joined for higher studies.

Table 7.3(ii): Higher Study Details

Competitive Examination Year	No of students pursuing higher studies	GATE/PGCET	No of student admitted in premium institutions (MS, MBA, ME, Mtech)
2018-19	1	PGCET	MBA Ankitha Shukla
2019-20	1	PGCET	MBA Yeshaswini

7.4 Improvement in the quality of students admitted to the program (10)

Total Marks 8.00

Institute Marks : 8.00

Item		2020-21	2019-20	2018-19
National Level Entrance Examination	No of students admitted	0	0	0
	Opening Score/Rank	0	0	0
	Closing Score/Rank	0	0	0
State/ University/ Level Entrance Examination/ Others KEA-CET	No of students admitted	63	51	62
	Opening Score/Rank	23003	28856	42596
	Closing Score/Rank	201215	133157	208333
Name of the Entrance Examination for Lateral Entry or lateral entry details KEA-DCET	No of students admitted	5	7	2
	Opening Score/Rank	0	6217	0
	Closing Score/Rank	0	12256	0
Average CBSE/Any other board result of admitted students(Physics, Chemistry&Maths)		85	81	83

8 FIRST YEAR ACADEMICS (50)   Total Marks 36.89

8.1 First Year Student-Faculty Ratio (FYSFR) (5)   Total Marks 5.00

                                              Institute Marks : 5.00

Please provide First year faculty information considering load for the particular program

Name of the faculty member	PAN No.	Qualification	Date of Receiving Highest Degree	Area of Specialization	Designation	Date of joining	Teaching load (%)			Currently Associated (Yes / No)	Nature Of Association (Regular / Contract)	Date Of leaving(In case Currently Associated is 'No')
							CAY	CAYm1	CAYm2			
ASHA V	ALZPA5995N	M.E/M.Tech	27/06/2015	CSE	Assistant Professor	27/07/2015	100	100	100	Yes	Regular	
RASHMI B K	BFTPR4493D	M.E/M.Tech	01/08/2012	CSE	Assistant Professor	01/08/2012	100	100	100	Yes	Regular	
PREMA C	ALFPC9993E	M.E/M.Tech	01/03/2013	CSE	Assistant Professor	08/06/2017	100	100	100	No	Regular	24/07/2021
Hanumesh	AHBPH0356C	M.Sc	01/09/2010	Mathematics	Assistant Professor	22/07/2013	100	100	100	Yes	Regular	
Radha R	BRDPR4772B	M.Sc	01/07/2011	Mathematics	Assistant Professor	23/08/2011	100	100	100	No	Regular	30/12/2019
Muktha J	BDEPR9898F	M.Sc	09/05/2008	Mathematics	Assistant Professor	02/08/2010	100	100	100	No	Regular	18/07/2018
Apoorva E	BGOPA7781H	M.Sc	30/07/2012	Mathematics	Assistant Professor	11/08/2014	100	100	100	Yes	Regular	
Shankaranand	BMLPS5390F	M.Sc. and PhD	17/07/2014	Physics	Associate Professor	20/10/2009	100	100	100	No	Regular	17/03/2020
Venkatesh K	AAGPV1705R	M.Sc. and PhD	07/02/1981	Physics	Professor	03/09/2012	100	100	100	No	Regular	31/07/2019
Lakshmidevi	ALCPL0601M	M.Sc	28/09/1998	Physics	Assistant Professor	08/02/2012	100	100	100	No	Regular	12/12/2017
Ashalatha M L	BNZPA4570N	M.Sc	14/07/2014	Physics	Assistant Professor	04/08/2014	100	100	100	No	Regular	03/04/2017
Tejaswi C M	ASAPT7787K	M.Sc	12/01/2014	Mathematics	Assistant Professor	01/08/2014	0	100	100	No	Regular	12/02/2016
D N Rao	ACMPD4416H	M.Sc. and PhD	24/03/1984	Chemistry	Associate Professor	25/07/2016	100	0	0	No	Regular	31/07/2019
Ajaykumar Sinl	ASGPS3207B	M.Sc. and PhD	09/07/1997	Chemistry	Associate Professor	01/08/2012	100	100	100	No	Regular	31/07/2019
Thejaswini D	BHGPD4257E	M.Sc	03/11/2009	Chemistry	Assistant Professor	22/02/2012	0	100	100	Yes	Regular	
Jagadeesh B N	ATAPJ9084E	M.E/M.Tech	05/05/2016	Civil	Assistant Professor	08/08/2016	100	0	0	No	Regular	29/07/2020
Keerthiprasad	CJWPK3131R	M.E/M.Tech	05/05/2016	Mechanical	Assistant Professor	18/07/2016	100	0	0	No	Regular	09/12/2019
Srinivasu N	FMKDS4933P	M.E/M.Tech	23/08/2013	Mechanical	Assistant Professor	06/09/2013	0	100	100	No	Regular	19/01/2017
Satish HB	FMWPS4572L	M.E/M.Tech	05/04/2013	Mechanical	Assistant Professor	07/08/2015	100	100	100	No	Regular	12/02/2018
Sowmya G J	BAKPJ7291R	M.E/M.Tech	04/09/2014	EEE	Assistant Professor	21/07/2014	100	100	100	Yes	Regular	
Chandrakumar	ARKPC6386N	M.E/M.Tech	19/01/2010	ECE	Assistant Professor	11/08/2014	100	100	100	No	Regular	17/02/2020
Vijayalakshmi I	AMVPV0448C	M.E/M.Tech	18/12/2010	ECE	Assistant Professor	22/07/2011	100	100	100	Yes	Regular	
Vimala	AIUPV1396A	M.Sc	10/06/2008	Mathematics	Assistant Professor	24/02/2016	100	0	0	No	Regular	05/08/2016
Prakasha M P	BGIPP8530K	M.Phil	01/06/2008	Chemistry	Assistant Professor	16/08/2011	100	100	100	Yes	Regular	
Nitish	AVYPN7970M	M.E/M.Tech	10/02/2014	Civil	Assistant Professor	21/07/2014	0	100	100	No	Regular	29/12/2016
Raghu C N	AISPN1052B	M.E/M.Tech	05/04/2012	EEE	Associate Professor	25/07/2012	100	100	100	No	Regular	30/06/2017
Shyamsundar I	CAAPS0372R	M.E/M.Tech	02/05/2011	EEE	Assistant Professor	08/08/2014	100	100	100	No	Regular	26/02/2020
PRAVEEN KUI	BFMCA7439V	MA	19/09/2013	LAW	Assistant Professor	19/08/2014	100	100	100	No	Regular	27/07/2018
RAVIKUMARA	AFWPR0532F	M.Sc	06/03/2003	MATHEMATICS	Associate Professor	24/08/2012	100	100	100	No	Regular	31/07/2019
PREMSAGAR	ANXEG9945L	M.E/M.Tech	03/05/2014	ECE	Assistant Professor	09/09/2013	100	100	100	No	Regular	27/02/2021

Year	Number Of Students(approved intake strength) N	Number of Faculty members(considering fractional load) F	FYSFR (N/F)	*Assessment=(5*20)/FYSFR(Limited to Max.5)
2018-19(CAYm2)	480	26	18	5.00
2019-20(CAYm1)	480	26	18	5.00
2020-21(CAY)	480	26	18	5.00
Average	0	0	0	0

8.2 Qualification of Faculty Teaching First Year Common Courses (5)

Total Marks 1.33

Institute Marks : 1.33

Year	x (Number Of Regular Faculty with Ph.D)	y (Number Of Regular Faculty with Post graduate Qualification)	RF (Number Of Faculty Members required as per SFR of 20:1	Assessment Of Faculty Qualification [(5x + 3y) / RF]
2018-19	3	14	24	2.00
2019-20	0	10	24	1.00
2020-21	0	8	24	1.00

Average Assessment: 1.33

8.3 First Year Academic Performance (10)

Total Marks 5.56

Institute Marks : 5.56

Academic Performance	2020-21	2019-20	2018-19
Mean of CGPA or mean percentage of all successful students(X)	8.57	7.48	6.17
Total Number of successful students(Y)	50.00	41.00	41.00
Total Number of students appeared in the examination(Z)	60.00	62.00	55.00
API [X*(Y/Z)]	7.14	4.94	4.60

Average API[(AP1+AP2+AP3)/3] :   5.56

Assessment [1.5 * Average API] :   5.56

8.4 Attainment of Course Outcomes of first year courses (10)

Total Marks 9.00

8.4.1 Describe the assessment processes used to gather the data upon which the evaluation of Course Outcomes of first year is done (5)

Institute Marks : 4.00

Attainment level measured in terms of student performance with respect to internal assessments of a subject plus the performance in the University examination

TARGET & ATTAINMENT LEVELS OF COS FOR INTERNAL ASSESSMENT

Target is stated in terms of number of students scoring greater than or equal to 60% (>=12) in the internal assessment for a maximum marks of 20. Attainment Level 60% of the students scoring greater than or equal to 12 in the internal assessment is set as an attainment level and if the targets are achieved then all the course outcomes are attained for that year

TARGET & ATTAINMENT LEVELS OF COS FOR EXTERNAL ASSESSMENT

Target is stated in terms of number of students pass in examination i.e scoring greater than or equal to 28 marks out of 80 or 40% marks total in the external exam for a maximum marks of 100. Attainment Level 75% of the students scoring greater than or equal to 28 (>= 28) in the external assessment is set as an attainment level and if the targets are achieved then all the course outcomes are attained for that year

DATA COLLECTION PROCESS & PROCEDURE:

- In the Outcome Based Education (OBE), assessment is done through one or more than one processes, carried out by the institution, that identify, collect, and prepare data to evaluate the achievement of course outcomes (CO's).
- Assessment tools are categorized into two methods : Direct methods and indirect methods.
- Direct methods measures the student's knowledge and skills based on the performance in the continuous internal assessment tests, semester examinations and classroom and laboratory assignments etc. These methods measures the level of what students know and/or can do after learning.
- Indirect methods such as surveys will reflect on student's learning. They assess opinions or thoughts about the graduate's knowledge or skills and they are valued through survey from different stakeholders.

Continuous Internal Evaluation (CIE)

Sl.no	Assessment Methods
1	Test
2	Quiz
3	Assignments
4	Seminar
5	Laboratory

Semester End Examination (SEE)

Sl.no	Assessment Methods
1	Theory examination

2	Laboratory examination

Direct Assessment of Theory & Lab:

- Internal test are conudcted as per the calendar of Events set by instuitutions and IA marks are computed considering the performance of the students in internal test plus assignment .
- The lab evluations are caluclated as per the rubrics and assigned
- The Maximum Internal assessment for 2015 scheme is 20 marks .

Direct Assessment Methods are formative as well as summative	
For some of the POs that are abstract, rubrics has been designed using performance indicators and shared with the students in advance. This helps students to understand against which parameter their work will be judged". These rubrics can be used by students in, revising, and judging their own work and progress.	
Internal Assessment Test	Qualitative performance assessment tool such as Class tests are conducted by course coordinator to assess students knowledge and problem solving skills.
End semester exam (theory + practical)	Semester End examination is the metric for assessing whether all the POs are attained or not. Examination is more focused on attainment of course outcomes and program outcomes.
Lab Internal Test	This is mainly to assess student's practical knowledge with their design thinking or logical analysis capabilities.
Indirect Assessment Methods	
Course end survey	To evaluate the success of program in providing students with opportunities to achieve the program outcome- every year

Sl. No.	Assessment Method	Assessment frequency	Assessment Tool	Incharge	Reviewer
1	Internal Assessment Test	At the end of 5th 10th, 15th week of each Semester	Student's performance in internal assessment booklets.	Course Faculty	I st year co-ordinator
2	End semester exam (theory + practical)	At the end of the semester	Student's performance in university exams	Evaluators assigned by University	
3	Lab Internal Test	At the end of the semester	Student's performance in conducting experiments	Course Faculty	I st year co-ordinator
4	Course end survey	At the end of the semester	Student survey	Course Faculty	I st year co-ordinator

Rubrics for continuous evaluation in every lab session-Max Marks: 25

Parameters	High	Marks	Medium	Marks	Low	Marks
Conduct /Perform (10 Marks)	Understood the objective of the experimental setup/algorithm	2	Partially Understood the objective of the experimental setup/ compared the output with computation	1	Not Understood the objective & not completed the work in the lab session	0 marks
	Rigged up the circuit/ Executed the Program/Performed the expeiment/Recording the Tabulation / Calculation	4	Partially Rigged up the circuit/ Executed the Program/ Performed the expeiment/	2		
	Compare the output with computation / The output result with calibrated reading /Executed the program & obtained the output correctly	4	Partially compared the output with calibrated reading /computation / obtained the output.	2		
	Total: 10 Marks		Total: 5 Marks		Total: 0 Marks	
Record Writing (10 Marks)	Clearly Stated Aim/Procedure/theory for the given problem /experiment	4	Partially Stated Aim/Procedure/theory for the given problem /experiment	2	Non – Submission of record in the lab session	0
	Clearly Stated algorithm/ design/ Drawing / calculation/ tabulation	4	Partially Stated algorithm/ design/ calculation/ tabulation	2		
	Clearly Stated the result/conclusions/compared the result with computation/ drawn graph	2	Partially Stated the result/ conclusions /compared the result with computation/ drawn graph	2		
	Total: 10 Marks		Total: 6 Marks		Total: 0 Marks	
Viva Voce or Quiz (5Marks)	Answered 5 questions	Answered 4 questions	Answered 3 questions	Answered 2 questions	Answered 1question	Student did not answer any question

Total:	Total:	Total:	Total:	Total:	Total:
5 Marks	4 Marks	3 Marks	2 marks	1 Mark	0 Marks

Rubrics for Evaluation of Internal Lab Examination-Max Marks: 15

Parameters	High	Marks	Medium	Marks	Low	Marks
Conduct **(5 Marks)**	**Student is able to design//tabulate / write appropriate formula used for calculation / write algorithm /expected result.**	2	**Partially Able to draw circuit but doesn't design / write a program doesn't know the algorithm**	1	**No knowledge of the given experimental setup &problem statement**	0
	Draw/ Tabulate or write Program / Computation and obtain result	2	**Partially Know the Program / Experimental setup**	1		
	Able to debug the circuit or program	1		1		
	Total: 5 Marks		Total: 2 marks		Total: 0 Marks	
Execution **(5 Marks)**	**Able to Execute the experiment compile the problem without error**	3	**Partially able to conduct the given experiment**	1	**Not able to execute**	0
	Draw/ Tabulate/ conduct/ execute the program	2		1		
	Obtain the result as expected	1	**Partially Obtain the result as expected**	1		
	Total: 5 Marks		Total: 2 Marks		Total: 0 Marks	
Viva Voce or Quiz **(5 Marks)**	**Answered 5 questions**	**Answered 4 questions**	**Answered 3 questions**	**Answered 2 questions**	**Answered 1 question**	**Did not answer any question**
	Total: 5 Marks	Total: 4 Marks	Total: 3 Marks	Total: 2 marks	Total: 1 Mark	Total: 0 Marks

8.4.2 Record the attainment of Course Outcomes of all first year courses (5)   Institute Marks : 5.00

The attainment of course is evaluated based on the following rubrics.

80% of Weightage to University exams & 20 % weightage to Internal Assessment Test. Based on that attainment level is calculated.

CO/Course code	15MAT11
CO1	Establish nth derivatives of product of two functions and polar curves
CO2	Demonstrate the concept and use of partial differentiation in various engineering problems
CO3	Recognize and solve first order ODE and Newton's law of cooling
CO4	Formulate the integration of trigonometric functions involving positive integral power and solving physical problems
CO5	Analyze the techniques for solving the system of linear equations in different areas of linear algebra
CO6	Explain the velocity and acceleration in three dimension and vector calculus and Identify the rough sketch of curves in various coordinate systems.

CO/Course code	15MAT21
CO1	Analyze and Solve Ordinary differential equations of electrical circuits forced oscillation of mass spring and elementary heat transfer
CO2	Recognize the Partial differential equations in fluid mechanics , electromagnetic theory and heat transfer
CO3	Formulate Double and triple integrals to find Area, Volume, Mass and Moment of inertia of plane and Solid region
CO4	Use curl and divergence of vector valued functions in various applications of electricity magnetism and fluid flows
CO5	Use Laplace transforms to determine general or complete solution to linear ODE
CO6	Interpret the relationship between beta and gamma function and apply the concept for easier approach towards integration

CO/Course code	15PHY12/22
CO1	Learn & understand more about basic principles & to develop problem solving skills and implementation in technology
CO2	Gain knowledge about modern about modern physics and quantum mechanics will update the basic concepts to implement the skills.
CO3	Study of material properties and their applications is the prime role to understand and use in engineering applications and studies
CO4	Study lasers and optical fibres and its applications are to input knowledge and to develop skills and to use modern instruments in the engineering applications
CO5	Understand crystal structure and applications are to boost the technical skills and its applications
CO6	Expose shock waves concepts and its applications will bring latest technology to the students at the first year level to develop research orientation programs at higher semester level
CO7	Understand basic concepts of nano science and technology

CO/Course code	15CHE12/22
CO1	Understand the principles of electrochemistry & battery technology in our day -today life.
CO2	Apply the knowledge of Corrosion and metal finishing in solving environmental issues.
CO3	Utilize the knowledge of fuels and solar energy for various Engineering applications
CO4	Apply the knowledge of polymer chemistry in replacement of conventional materials by polymers for various applications
CO5	Utilize the knowledge of water technology for various engineering applications
CO6	Develop solutions for problems associated with nano technology.

CO/Course code	15CIV13/23
CO1	Know basics of Civil Engineering, its scope of study, knowledge about Roads, Bridges and Dams
CO2	Comprehend the action of Forces, Moments and other loads on systems of rigid bodies
CO3	Compute the reactive forces and the effects that develop as a result of the external loads
CO4	Locate the centroid and compute the MOI of regular cross sections
CO5	Express the relationship between the motion of bodies
CO6	Equipped to pursue studies and allied courses in mechanics

CO/Course code	15PCD13/23
CO1	Achieve Knowledge of design and development of problem solving skills
CO2	Understand the basic principles of Programming in C language
CO3	Design and develop modular programming skills.
CO4	Effective utilization of memory using pointer technology, and
CO5	Understands the basic concepts of pointers and data structures.

CO/Course code	15EME14/24
CO1	Apply the basic in core mechanical science and principles in their further Engineering Career.
CO2	Perceive the essentialities of sustainable energy generations.
CO3	Impart wide Knowledge about primary parts of Global voracious Consumers' mechanical products (Prime Movers, Refrigeration System, Air-Conditioning system and Boiler).
CO4	Analyze and automate the joints and FOM's eventually conceptualize robot for various case scenarios.
CO5	Recognize engineering materials of any tangible products. Apply the knowledge of tools, machining process and joining processes.

CO/Course code	15ELN15/25

CO1	Understand the significance of electronics in present day life.
CO2	Learn the applications of basic electronic circuits like diodes, transistors, flip-flops, transducers, Opamps etc.
CO3	Analyze various modulation technologies and present day communication systems
CO4	Apply the concept of diodes and transistors in rectifiers, filters, oscillators, bias circuits etc
CO5	Design simple circuits like amplifiers, adders, integrator using transistors/opamps
CO6	Design simple digital circuits using FFs which can be used in day to day life.

CO/Course code	15ELE15/25
CO1	Impart a basic knowledge of electrical quantities such as voltage, current, power, energy and frequency to understand the impact of technology in a global and societal context.
CO2	Provide working knowledge for the analysis of basic DC and AC circuits used in electrical and electronic devices.
CO3	Develop selection skill to identify the type of generators or motors required for particular application.
CO4	Highlight the importance of transformers in transmission and distribution of electric power.
CO5	Emphasize the effects of electric shock and precautionary measures.
CO6	Improve the ability to function on multi-disciplinary teams.

SL. No	Subject Name	Subject code	Target Set	CO ATTAINED					
				CO1	CO2	CO3	CO4	C05	C06
				1st Year					
1.	Engineering Maths-I ->C101	15MAT11/21	2.1	2.75	2.8	2.4	2.6		
2.	Engineering Physics--> C102	15PHY12/22	2.2	2.75	2.8	2.4	2.6	2.7	1.2
3.	Elements of Civil Engg. & Mechanics ->C103	15CIV13/23	2.4	2.75	2.8	2.4	2.6	2.7	1.5
4.	Elements of Mechanical Engg. ->C104	15EME14/24	2.1	2.6	2.8	2.4			
5.	Basic Electrical Engg.->C105	15ELE15/25	1.5	2.8	2.4	2.6	2.8	2.4	
6.	Workshop Practice	15WSL16/26	2.8	2	2	1	1		
7.	Engg. **Physics** Lab	15PHYL17/27	2.8	2	2	2	1	1	
8.	Engineering Maths-II->C111	15MAT11/21	2.3	2.4	2.6	2.8	2.4	2.4	
9.	Engineering Chemistry ->C112	15CHE12/22	2.2	2.75	2.8	2.4	2.6	2.7	1.75
10.	Programming in C & Data Structures->C113	15PCD13/23	2.3	2.6	2.8	2.4	2.4	2.6	
11.	Computer Aided Engineering Drawing-> C114	15CED14/24	2.4	2.8	2.4	2.6			
12.	Basic Electronics ->C115	15ELN15/25	2.1	2.6	2.8	2.4	2.4	2.6	2.8
13.	Computer Programming Lab ->C116	15CPL16/26	2.7	3	3	3	2	2	
14.	Engg. Chemistry Lab ->C17	15CHEL17/27	2.8	3	2				

8.5 Attainment of Program Outcomes from first year courses (20)

8.5.1 Indicate results of evaluation of ezch relevant PO and/ or PSO, if applicable (15)

Total Marks 16.00

Institute Marks : 12.00

POs Attainment:

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C101	3	3	3	2	2	0	0	0	0	1	0	3
C102	3	2	2	0	0	0	0	0	2	0	0	1
C103	3	3	3	0	0	0	0	0	0	0	0	0
C104	3	1	3	0	3	2	1	0	0	3	0	1
C105	3	3	2	1	0	0	0	0	0	2	2	3
C106	1	3	2	0	0	0	0	0	0	0	0	0
C107	1	3	2	0	0	0	0	0	0	0	0	0
C108	2	0	0	0	0	3	3	3	0	0	0	0
C111	3	3	3	3	3	0	0	0	1	3	0	3
C112	3	3	0	0	0	0	3	0	0	0	0	3
C113	3	3	3	1	3	0	0	0	3	1	0	1
C114	2	0	2	2	1	0	0	0	0	2	0	2
C115	3	2	2	0	0	0	0	0	0	0	0	0
C116	3	3	3	1	3	0	0	0	3	1	0	1
C117	2	3	1	3	2	0	0	0	0	0	0	0
C118	1	0	0	0	0	2	2	1	1	0	0	1
C119	0	0	0	0	0	0	0	0	0	3	0	3

PO Attainment Level

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
Direct Attainment	2.44	2.69	2.38	1.86	2.43	2.33	2.25	2	2	2	2	2
CO Attainment	2.44	2.69	2.38	1.86	2.43	2.33	2.25	2	2	2	2	2

PSOs Attainment:

Course	PSO1	PSO2
C107	1	1
C111	1	0
C118	1	0
C119	1	0

PSO Attainment Level

Course	PSO1	PSO2
Direct Attainment	1	1
CO Attainment	1	1

8.5.2 Actions taken based on the results of evaluation of relevant POs (5)   Institute Marks : 4.00

POs Attainment Levels and Actions for Improvement- (2019-20)

POs	Target Level	Attainment Level	Observations
PO 1 : Engineering Knowledge			
PO 1	90	81.33	Target not achieved
1. ICT enabled teaching. 2. Problem oriented extra classes were Conducted 3. Problematic assignments were given			
PO 2 : Problem Analysis			
PO 2	90	89.66	Target Achieved
1. Analytical assignments were given. 2. Students were practiced to analyze problems and analytical concepts.			
PO 3 : Design/development of Solutions			
PO 3	90	79.33	Target not achieved
1. Special attentions were given to engineering subjects, helped to develop solutions for various engineering problems. 2. Design procedure for simple computer programs, electrical and electronic circuits was discussed.			
PO 4 : Conduct Investigations of Complex Problems			
PO 4	90	62	Target not achieved
1. To investigate complex problems, the significance of literature survey on the topics of current research was outlined to students. 2. Students were encouraged to participate in seminars, SDP's and workshops. 3. Students were encouraged to participate in Project Expos.			
PO 5 : Modern Tool Usage			
PO 5	83.33	81	Target not achieved
1. Latest Techniques are used in C Programming to solve problems.			
PO 6 : The Engineer and Society			
PO 6	83.33	77.66	Target not achieved
1. Ethics of engineers and its importance being emphasized. 2. Engineers contribution to public was emphasized through the course Constitution of India and Professional Ethics. 3. Orientation program also outlined the contribution of engineers to the society			
PO 7 : Environment and Sustainability			
PO 7	83.33	75	Target not achieved
1. Engineers contribution to environment was emphasized through the course Environmental Science. 2. Talks were conducted on e-waste and its disposure 3. Students were encouraged to attend seminars, talks and workshops on environment and sustainability			
PO 8 : Ethics			
PO 8	83.33	66.66	Target not achieved
1. Ethics of engineers and its importance being emphasized through the course Constitution of India and Professional Ethics. 2. Students were taught ethical usage of various software. 3. Students were demonstrated togetherness by participating in teams in various events			
PO 9 : Individual and Team Work			
PO 9	83.33	66.66	Target not achieved
1. Seminar were conducted to showcase individual talent. 2. Group discussions on current research were given during the classes. 3. Experiments were conducted in teams and individually to demonstrate the importance of team work.			
PO 10 : Communication			
PO 10	83.33	66.66	Target not achieved
1. Importance of communication skills in the industry was emphasized 2. Assignments were given in English classes. 3. seminar reports and record of experiment conducted were made by students.			
PO 11 : Project Management and Finance			
PO 11	83.33	66.66	Target not achieved
1.Students get hands on experience on managing events and associated finances by participating actively in the Curricular, Co-curricular and department activities. 2.Students were encouraged to participate in various projects. 3.Students were taught about managerial skills.			
PO 12 : Life-long Learning			
PO 12	83.33	66.66	Target not achieved
1. Importance of upgrading themselves to latest technologies were emphasized. 2. Encouraged to learn few topics beyond syllabus by themselves. 3. Life skills were developed			

PSOs Attainment Levels and Actions for Improvement- (2019-20)

PSOs	Target Level	Attainment Level	Observations
PSO 1 : Apply the software practices, principals to design and analyse the complex computer based system.			
PSO 1	33.3	33.3	Target achieved
1. Seminars were conducted on basic software fundamentals. 2. Importance of computational skills were discussed 3. Students were asked to solves problems beyond syllabus.			
PSO 2 : Design, implement and validate system software and application software to the various societal needs.			
PSO 2	33.3	33.3	Target achieved
Emphasized importance of Design implements and validate system and application software to the various societal needs during program classes			

9 STUDENT SUPPORT SYSTEMS (50)   Total Marks 40.00

9.1 Mentoring system to help at individual level (5)   Total Marks 4.00

Institute Marks : 4.00

<u>**Mentoring System**</u>

Objective:

Faculty members as Mentors must keep in mind the students' best interests, abilities, skills and talents, by guiding them to realize their best potential.

Operating procedure:

1. Allocation of mentees to faculty members by the mentor coordinator /HOD at the beginning of the academic year.

2. <u>Procedure for allocation</u>:

No. of Mentors= total number of students/ total no. of available faculty

3. Mentor orientation by the head of the institution.

4. Orientation for students by the head of the department

5. The basic science department faculty will be the mentors for first year students.

6. The records of mentees, updated in all respects will be handed over to the respective departments by the basic science department at the end of 2nd semester.

7. Mentoring to be slotted in the time table to facilitate the meetings.

8. The mentors should be aware of the strengths and weaknesses of the mentees.

9. Mentor should maintain a file on each mentee recording their meetings, academic record, parent contact,any medical or personal problem, co curricular activities ,general behavior in class, future plan ,mentoring reports and other important documents. eg medical certificate, leave letters etc.,

10. Mentors should bring to the notice of the head of the department/chief mentor/ Principal in case of any issues/problems.

11. Mentors must send the progress report to the parents after every internals within ten days from the last day of the test.

12. Mentors should regularly communicate parents regarding their wards academic performance

13. Regular meeting will be held between the head of the department and the mentors to assess the progress. The mentors can discuss the issues related to their mentees. Head of the department should also meet mentees informally to take feedback about mentor and the mentoring process.

14. Mentoring will be a parameter in evaluating a faculty members performance in a year.

15. Mentor committee will monitor and evaluate the process, by conducting regular audits and submit the report to the head of the institution.

9.2 Feedback analysis and reward /corrective measures taken, if any (10)   Total Marks 8.00

Institute Marks : 8.00

A. Methodology being followed for analysis of feedback and its effectiveness

Student feedback is collected in both odd and even semester from Iqac for all the courses. The feedback is collected, analysed and communicated to all faculty members once in a Semester through Principal & HOD. The faculty members with prescribed norms in feedback are counselled by the HOD, Principal, taking corrective measures if required. The indices used for measuring teaching and learning through Student Feedback are as follows:

- Is the Faculty punctual to the class?

- Is the Faculty takes class regularly?

- Rate the pace of teaching and syllabus coverage.

- The teacher has good Commend over the Subject.

- Does the faculty maintains the class room discipline.

- Does the faculty effectively uses visual media (Black board/ppt/videos other ICT facilities etc)

- Does the faculty encourages students' interaction and clarify the doubts satisfactorily

- Is the Faculty available for discussion apart from the class hours.

- Does the faculty solves the VTU Questions and sets the IA papers as per VTU Standard.

- Does the faculty discuss the scheme of IA and maintains transparency in evaluations.

With the aid of the response given by the students, average percentage of feedback is calculated and circulated to the faculty.

The sample copy of feedback is shown in belowe figure 9.2(a)

Figure 9.2(a): Sample copy of Feedback

B. Record of corrective measures taken

Based on the consolidated feedback reports the faculty members are appraised about their performance. The faculty members who follow good and innovative teaching pedagogies are appreciated and awarded according to their self-appraisal points on teachers day.

Necessary corrective actions are taken for the faculty members who score less than the institution standard, are followed as given below.

- Head of the department advise the faculty about handling and monitoring the class.
- Encouraging faculty to attend more seminars, workshops and Faculty Development Programs (FDPs).
- Suggestions are given to enhance their academic skill set with the peer support within a stipulated time period. The performance is reviewed by the head of the department regularly.
- To motivate all the faculty members recognition is given to the Best performance faculty members in various categories.
- The sample copy of recognition to faculty is shown in below figure 9.2(b).

Figure 9.2(b): Sample copy of recognition to faculty

9.3 Feedback on facilities (5)

Total Marks 4.00

Institute Marks : 4.00

Feedback on Facilities:

A standard procedure for feedback on facilities is taken up in the department as per the following steps:

1. Every year, The feedback on the infrastructure facility is taken up through student survey and Graduate exit survey from students
2. The feedback is also collected orally during meeting with stakeholders i.e parents, alumni, employer)
3. The department conducts Parent Teacher meeting and collect feedback
4. The feedback is analyzed and reports prepared to take up necessary corrective measures and are implemented with appproval of head of the institute.

Process followed in feedback:

1. Feedback collection process

2) Feedback analysis and report generation

3) Plan to Corrective measures

4. Implementation of plan of action

Feedback collection process:

1. Prepare Feedback question on all facilities provided by the college with the approval of head of the institute

2. Generate computerized Feedback forms and share to the students
3. The Administrative department receives feedback
4. Analyze the feedback using the Metrics as 5-Excellent 4-Very good 3-Good 2-Satisfactory 1-Below average
5. Additional question given in feedback for the students to share any view points as their perspective

Composition of Feedback Questions:

The feedback question are prepared by considering the following Heads:

1, Educational Guidance and Grievance

2. Facilities, tools and equipment

3. Academics

4. Attitude towards students

5. Premises

6. CanteenServices

7.Library

8.Teaching and Learning(Content and Methods)

9.Practical

10.Placement and Training

11. Sports/NSS/Yoga/Transportation

Feedback analysis

1. The feedback given by the students is consolidated and analyzed.
2. The Principal discuss consolidated report with the Head of the department and prepares plan of action
3. All the department executes the plan as discussed

Corrective measures:

Some of the corrective actions initiated are:

· canteen / Hostel committee is created to monitor the food quality in canteen and boys, girls hostel.
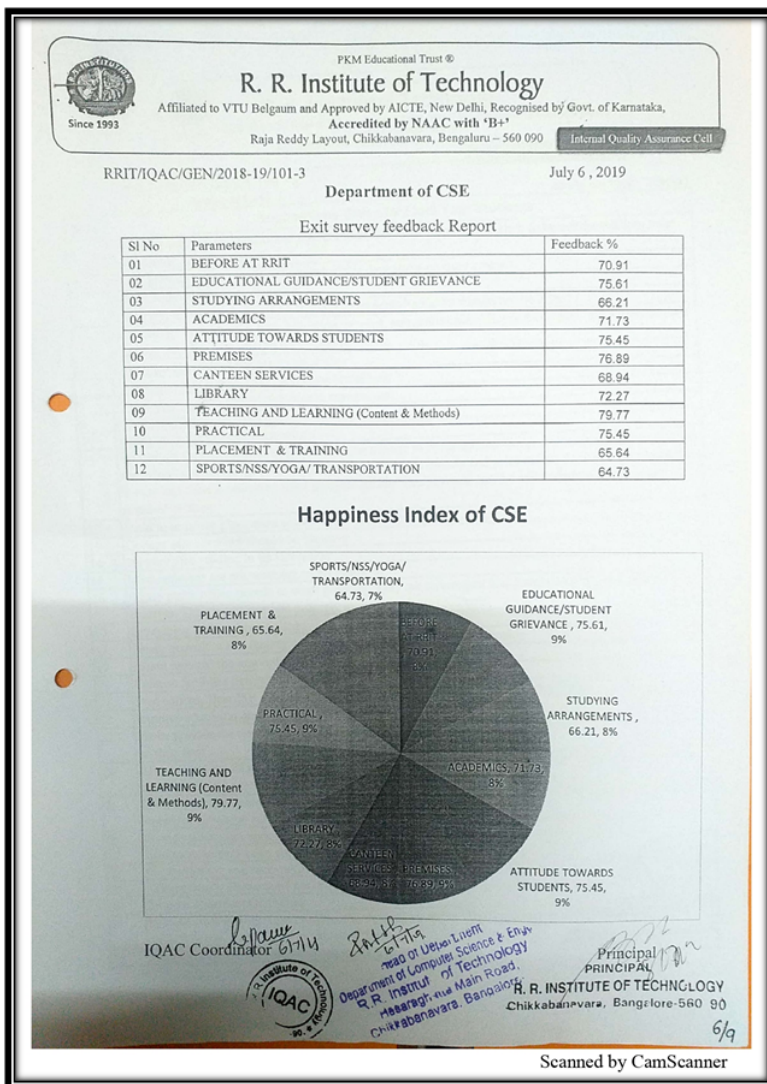

Figure 9.3(a): Sample copy of Feedback on Facility

9.4 Self-Learning (5)

<div align="right">

Total Marks 3.00

Institute Marks : 3.00

</div>

Self-Learning:

Self-Learning is a process by which individuals take the initiative, with or without the assistance of others, in diagnosing their learning needs, formulating learning goals, identifying human and material resources for learning, and evaluating learning outcomes.

A. Scope of self-learning includes

- Library
- Digital Library
- Professional bodies/other association activities
- Industrial visit
- Seminars & workshops
- Language Lab
- Online resources
- Assignment
- Research Publications

B.Self Learning Facilities

The below table 9.4(i) shows self learning facilities available.

Table 9.4(i): Self learning facilities

Sl No	Self-learning process	Description
1.	Library	• The college library is enriched with vast collection of books, journals, periodicals, research articles. The library is equipped with 20 systems with internet facility.
2.	Digital Library	• Faculty and students have access to the following content: • IEEE IEL Online database • ASCE e-journals Elsevier-Science • ASCE Civil Engineering
3.	Professional bodies/other association activities	• A professional association is one of the most important activities in a student career. • All career options related to professional association, offers valuable information and resources for their career enhancement. • College is a registered member of following professional bodies: ISTE, CSI, Institution of Engineers India (IEI) & IEEE.
4.	Industrial visit	• Industrial visit is a part of college curriculum during which students visit companies and get insight regarding the internal working environment of a company. • It helps students to gain first-hand information regarding functioning of the industry. • Provides an opportunity to plan, organize and engage in active learning experiences both inside and outside class room. • Provides an awareness and importance of industry in the real working world. • Assist them for future placement. • Helps to enhance their interpersonal and communication skills, it also enriches the knowledge about industrial practices.
5.	Seminars & workshops	• A seminar is a group meeting led by an expert that focuses on specific topic or discipline such as emerging technologies and job opportunities. • Attending seminar will have numerous benefits to a student for improving communication skills and gaining domain knowledge. • Seminars are conducted frequently at the department level and the seminars offer students to interact with industry experts, research persons, entrepreneurs and small business partners. • Workshops allow a student to further develop marketable business skills in a focused interactive environment.
6.	Assignments	• It enables students to go through the topics in a more elaborate manner in order to explore the academic topic, which lead to an overall better learning experience. • Assignments help the students to understand the subject in a more detailed pattern. • Faculty give assignments on regular basis and they are graded.
7.	Language Lab	• Technical english software has been installed in the Language lab. • Students and Staff make use of this lab for improving there communication skills.
8.	Web based learning	• The internet is an open information system in which various sources of information, media and materials such as text, images, video sequences can be linked together in diverse ways to form so- called self-learning environment. • Internet offers new possibilities to structure, represent, adapt and integrate various learning content and materials.

9.	Research Publications	• Expands the knowledge of students in various fields and increases visibility, credibility and competitiveness of students. • Helps in presenting papers in conferences.
10.	Online resources	• Enhances active learning. • Contextualized content can be shared by all. • VTU e-resources • E-Sikshana.

Utilization and its effectiveness

The above facilities help students to present technical papers in conferences, publish papers in journals, take-up projects and participate in competitions/exhibitions and complete online certification courses.

- The overall aim of this review is to evaluate the effectiveness of self-directed learning on the professional development of students.
- Students are motivated to improve their initiation in reaching their goals.
- Students are able to scan through the reading material available to them.
- Many of the needs of students are best met by learning process. The students are encouraged to learn by themselves for their present and future needs.
- Students are able to do better in Placement drives and get placed in suitable companies.

9.5 Career Guidance, Training, Placement (10)					Total Marks 9.00

Institute Marks : 9.00

The institution has a structured and well organized training and placement cell. Few reputed companies from different domains visit the institution for recruitment.

A. Availability of Career Guidance facilities

All the students are provided with multidimensional career guidance throughout the course duration. Professional organizations and consultants/experts in higher education conduct seminars and counseling sessions.

Workshops/Seminars conducted for Career guidance are listed in below table 9.5(i) year wise.

Table 9.5(i) Career guidance activities

Academic Year	Name of the Programme	Date of Conduction	Agencies involved
2017-18	Internet of things	24-07-2017 to 28-07-2017	RRIT
	Auto cadd	2/14/2018	RRIT
	Student Knowledge enrichment & Enhancement program	9/9/2017	RRIT
	Soft skills & Personality Development	01/08/2017 to 05/08/2017	RRIT
2018-19	Innovation & Manufacturing start-ups- Karnataka small scale industries Association, Bengaluru	15-02-2019	MSME Center of excellence, NASSCOM, Bengaluru
	Effective Career planning after UG Program	20-02-2019	Vani institute, Bengaluru
	Seminar on "Exposures to the Entrepreneurship activity"	23-08-2018	Telenoc solutions
	Seminar on "Gate Exam & Scholarship Test"	17-09-2018	BDM Gate Forum, Bengaluru
	Seminar on "Overseas education opportunities"	18-09-2018	IDP Education India Pvt. Ltd.
	Seminar on "Effective career planning for engineering students"	2019	RRIT
2019-20	Career opportunities in networking	17-07-2020	Nawin Gurukula, Bengaluru
	Workshop on "Career in Cyber Security"	19-09-2019	QOS technology, Bengaluru
	Talk on IT Technology, emerging trends	30-08-2019	Livewire company
	Guest Lecture on Job Opportunities in India and abroad	2019	RR Institute of technology
	Guest lecture on Current Trends in Industry	2019	RR Institute of technology
	Higher studies and job opportunities in public sector	2019	RR Institute of technology

	Industrial talk-Educate students about corporate world	2020	RR Institute of technology
	Workshop on "Personality Development & Resume building"	30-06-2020	Parvam consul-tech pvt. Ltd., Bengaluru
2020-21	Career pathway and study abroad opportunities	15-05-2021 & 21-05-2021	AECC Global, Karnataka
	Study abroad opportunities & Visa guidance	19-10-2020	IDP, Canada.
	Current trends in ethical hacking and Microsoft international certification	12-11-2020	ATS Knowledge solutions, New Delhi, India

B. Encourage for higher studies

The institute organizes seminars on higher studies and conduct aptitude training sessions.

Many books and periodicals are available in the library for the students to enable them to prepare for various Civil service and competitive exams

Activities organized by the institute for higher studies are listed in below table 9.5(ii) year wise.

Table 9.5(ii) Activities for higher studies

Academic year	Name of the Programme	Agencies involved	Conducted Date
2017-18	Student Knowledge enrichment & Enhancement program	RRIT	9/9/2017
	Soft skills & Personality Development	RRIT	01/08/2017 to 05/08/2017
2018-19	Seminar on "Gate Exam & Scholarship Test"	BDM Gate Forum, Bengaluru	17-09-2018
	Seminar on "Overseas education opportunities"	IDP Education India Pvt. Ltd.	18-09-2018
2019-20	Personal counselling	RR Institute of technology	
	Career Opportunities & Awareness on Higher studies	IDP Education, India	29-08-2019
	Special talk on Research opportunities	RRIT	8-06-2020
	Technologies for competitive exam	RRIT	15-07-2020
	SDP on competitive exam preparation for jobs in public sector & qualifying gate	RRIT	2019

C. Pre-placement training

Pre placement trainings are conducted to help students get placed in better companies. Placement plays a key role in a students career. Students require excellent Functional skills, Leadership & Managerial skills. Placement activity includes Training programs, Workshops, Classroom Seminars, Conferences, participate in Quiz program. There is a placement cell functioning in the institution to arrange the placement training that includes aptitude, soft skill training and campus recruitment for students. In addition to this separate placement coordinators are assigned for each department to facilitate the placement process. Year wise trainings conducted are listed in below table 9.5(iii).

Table 9.5(iii) Activities for Pre-Placement

Academic Year	Name of the Programme	Date of Conduction	Agencies involved
2017-18	Pre placement training program	28-10-2017	7th sense talent solutions
	Soft skills personality development	01-08-2017	RR Institute of technology
2018-19	Skill Assessment test	19-02-2019	Hireme
	Root strap Session	13-02-2019	Grid infotech
	Ethical Hacking	06-02-2019	Offence security limited
	IOT	06-09-2018	CATSER
	Aptitude session	05-09-2018	Anil Nair classes

	Technical aptitude on C/C++	13-02-2019	RRIT
2019-20	Pre placement training program	28/08/2019 to 10/10/2019	RR Institute of technology
	Virtual memory management in Operating Systems	20-07-2020	Computer Science & Engineering, Department
	Software Engineering	24-07-2020	Computer Science & Engineering, Department
	Data structures & algorithms	25-07-2020	Computer Science & Engineering, Department
	OOPs with Java	28-07-2020	Computer Science & Engineering, Department
	Softskill Training	27/02/2020	iNurture
	Softskill Training	04/03/2020	Genesis Training Technology
	Aptitude Training	20/02/2020	Buzibrains
	Coding full stack training	10/04/2020	Destination Technology
	Softskill Development Training	24/04/2020	Career Focus
	Group Discussion Training	22/05/2020	Krackin
	Positive Mental Attitude	17/06/2020	Department of Strategy & Communication
	Industry Talk	19/06/2020	Global Tree
	Bridge between Industry	27/06/2020	Department of Strategy & Communication
	Positive Mindset	08/07/2020	Department of Strategy & Communication
	Resume Building and Skill Development Training	11/07/2020	CegonSoft

D. Placement process and support

- The training division of the placement cell through its custom made modules not just prepares the students for the corporate world but also to life at large.
- The cell organizes workshops/training personality development, soft skills, quantitative aptitude, company-specific modules, a crash course of technical topics and other placement-related training every year to all students across all semesters.
- To strengthen the industry-academia interaction, a number of technical talks, seminars, and workshops are also organized by inviting industry experts on topics like Artificial Intelligence, Machine Learning, Cyber Security, Data Analytics, life in a corporate world etc

Placement Process

- Prepare the list of students based on their merit.
- Invite companies to visit college for recruitment.
- If the company accepts, collect the relevant data from the company like the minimum cut-off percentage, branches in demand, selection procedures, number of students they want to recruit etc.,
- Make the students to ready for the requirement.
- Prepare the list of eligible students.
- Finalize the schedule and conduct the process

9.6 Entrepreneurship Cell (5)   Total Marks 3.00

A. Initiatives Taken

The Entrepreneurship cell was started with the aim of promoting trained knowledge in the field of entrepreneurship development. In view of worldwide shortage of jobs in both government and private sectors leading to unemployment problems and lack of proper utilization of human resources, the Cell strives to identify talented youth to entrepreneurial works. The Cell plans to organize various programmers regarding Entrepreneurship development.

Objective of the Cell

- Creating awareness among Students.
- Training Programs in the field of Entrepreneurship and Development.
- To Provide Guidance and facilities for the budding entrepreneurs during gestation.
- To encourage the development for the better linkages between the parent institutions, Industries, Research and Development (R&D) in the region and other organizations engaged in promoting Small and Medium Enterprises (SME) and Non-Governmental Organization.
- To industrialize rural and backward sections of the society.
- To offer profitable employment opportunities to Interested Students.
- To increase the supply of entrepreneurs for quick industrial development.
- To investigate the environmental set-up relating to small industries and small businesses.
- To respond effectively to the emerging challenges and opportunities both at national and international level relating to SME's and Micro Enterprises.

Functions

- To organize entrepreneurship awareness camps, entrepreneurship development programmes and faculty development programmes in the region for the benefit of Student and Teacher.
- To develop and introduce curriculum on entrepreneurship development at various levels including degree/diploma courses of the parent institution and other institutes in the region.
- To conduct research work and survey for identifying entrepreneurial opportunities.
- To guide and assist prospective entrepreneurs on various aspects such as preparing project reports, obtaining project approvals, loans and facilities from agencies of support systems and information on various technologies.
- To arrange industry visits for prospective entrepreneurs.
- To extend necessary guidance and escort services to the trainees in obtaining approval and execution of their projects.
- To provide testing, calibration, quality assurance, design, tool room, pilot plant and other facilities for entrepreneurs besides expertise in Intellectual Property rights, Patents search, etc.
- To render advice to sick enterprises and assist the entrepreneurs in rehabilitating them.
- To conduct skill development training programmers leading to self-employment   .

The table 9.6(i) shows the funds received to organize entrepreneurship awareness camp from entrepreneurship development institute of india.

Table 9.6(i): Funds received from entrepreneurship development institute of india

Sl. No.	Proposal Name	Received From	Year	Amount	Date
1	Entrepreneurship Awareness Camp	Entrepreneurship Development Institute of India	2018	16,000/-	10/8/2018

B. Students Beneficiary Programs

The below table 9.6(ii) shows entrepreneurship programs organized and benefitted details**.**

Table 9.6(ii): Entrepreneurship programs organized

Sl. No.	Name of the Activity	Organized Date
1	Entrepreneurship Awareness camp	29/10/2018
2	Seminar on Exposures to the Entrepreneurship Activity	23/08/2018
3	Seminar of Entrepreneurship Awareness Program	1/10/2018
4	Energy Literacy-Learn to design your own Solar home System	15/07/2020
5	Seminar on IPR & Patent filing Procedure	30/09/2020

9.7 Co-curricular and Extra-curricular Activities (10)

Total Marks 9.00

Institute Marks : 9.00

The college encourages the students to take part in both co-curricular and extra-curricular activities.

A. Sports and Cultural

Physical Education Department aims to develop students physical competence and knowledge of movement and safety. The objective of the department is Physical education are improved, physical fitness, Appreciation of physical activity, Sportsmanship development Improved social skills. The college providing Sports facilities like Sports Club, Foot Ball Ground, Basket Ball Ground, Volley Ball Court, Recreation Room like Chess, Carom , Table Tennis, Swimming Pool. Sports and cultural activities are organized at the institution level. The table 9.7(i), 9.7(ii) and 9.7(iii) shows sports and cultural activies for the academic year 2017-18, 2018-19 and 2020-21.

Table 9.7(i): Sports and Cultural activies for 2017-18

Year 2017-2018		
Activity	Level	Participants
Solo dance(Classical)	Institution level	14
Solo dance(Western)	Institution level	24
Dumb Charades	Institution level	14
Vegetable curving	Institution level	7
Rangoli	Institution level	13
Quiz Competition	Institution level	8
Face painting	Institution level	6

Solo Singing(Non classical)	Institution level	25
JAM	Institution level	8
Improv	Institution level	10
Mehandi	Institution level	16
Group Dance(Classical)	Institution level	2
Group Dance(Non Classical)	Institution level	26
Group Singing(Non classical)	Institution level	10
Kannada Antakshari	Institution level	5
Fireless cooking	Institution level	19
Hindi Antakshari	Institution level	7
Air crash	Institution level	4
Solo Singing	Institution level	23
Event 1- Group dance	Institution level	9
Event 2- Fashion Show	Institution level	18
Event 3- Group singing	Institution level	12

Table 9.7(ii): Sports and Cultural activies for 2018-19

Year 2018-2019		
Activity	Level	Participants
Fireless cooking	Inter- College (RR GROUP) level	4
Gaming		34
Flower arrangement		3
Hairstyle		7
Mehandi competition		12
Painting		4
Pencil sketch		7
Photography		5
Pot painting		4
Pot pourri		4
Rangoli		6
Short movie		5
Tik tok		7
Treasure hunt		6
Vegetable curving		3
Wolf of wall street		2
Annual Sports Meet 2019 19 Activities		120
Annual Sports Meet 2018 16 Activities		200
Debate competition(anti-drugs committee)	Intra - College level	40
Graduation day		250
Elocution competition		15
Elocution Competition- Development of Women in the field of Society, Politics, Industry, Science and Technology		10
Quiz Competition		17

Table 9.7(iii): Sports and Cultural activies for 2017-18

Year 2019-2020		
Activity	Level	Participants
Awareness Quiz on Pandemic	Institutions	211
Awareness Quiz on COVID -19	Department level	74
Awareness Quiz on first aid in case accidents	Institutions	47

Technical quiz –ME Dept.	Department level	66
Technical quiz –ME Dept.	Department level	67
Technical Quiz – EC dept.	Department level	52
Technical quiz on solid waste management	Department level	29
Technical quiz on Matrix method	Department level	19
Technical quiz on alternative building materials	Department level	20
Technical quiz on water resource management	Department level	60
Technical quiz on earthquake structure	Department level	50
Technical quiz on design of prestress concrete	Department level	48
Technical quiz on Quantity surveying and contract management	Department level	50
Technical Quiz on C,C++	Department level	146
Technical Quiz on DS	Department level	50
Technical Quiz on Python	Department level	103
Technical Quiz on Java	Department level	56
Technical Quiz on Data Communication	Department level	55
Technical Quiz on Data Mining	Department level	48
Technical Quiz on IOT	Department level	51
Technical Quiz on OS	Department level	88
Technical Quiz on Machine Learning	Department level	44
Technical Quiz on Algorithms	Department level	49
Technical Quiz on Cryptography	Department level	44
Technical Quiz on Big Data	Department level	87
Online Quiz on Virtual Memory Management in Operating Systems	Department Level	109
Online Quiz on Digital & Analog Transmission	Department Level	48
Online Quiz on Python for Data Science	Department Level	65
Online Quiz on Data Warehouse	Department Level	90
Online Quiz on Software Engineering	Department Level	64
Online Quiz on Data Structure & Algorithms	Department Level	56
Online Quiz on Machine Learning	Department Level	84
Online Quiz on OOPS with JAVA	Department Level	77

B. National Service Scheme (NSS) and Other Committees/Clubs

NSS aim developing the personality and character of the student youth through voluntary community service. NSS objectives, to understand the community in which they work. To understand themselves in relation to their community, Identify the needs and problems of the community and involve them in problem solving process, Identify the needs and problems of the community and involve them in problem solving process, Develop among themselves a sense of social and civic responsibility.The table 9.7(iv) shows activities organized from NSS and other committees/clubs for the academic year 2019-20, 2018-19 and 2017-18. The table 9.7(v) shows the student participation in extension activities for the academic year 2019-20, 2018-19 and 2017-18. The table 9.7(vi) shows awards & recognition received for extension activities. The table 9.7(vii) shows awards & recognition by students for participation in extension activities.

Table 9.7(iv): Activities organized from NSS and other committees/clubs for 2019-20, 2018-19 and 2017-18.

SI. No.	Academic Year	Title of the Activities	Organising Unit/Agency/ Collaborating Agency	Number of Teachers Participated in such activities	Number of students Participated in such activities
Year 2019-2020					
1	2019-20	Blood Donation Camp	Red Cross ,RRIT	1	150
2	2019-20	Environmental awareness program	NSS	2	15
3	2019-20	Constitution day	NSS	2	80
4	2019-20	Awareness program on Environmental Hazards of Electronic Waste -An initiative by MHRD, Govt. of India.	MHRD –ECE EEE RRIT	3	91
5	2019-20	Svasthya Jagruthi	Red Cross -RRIT Prakriya Hospital, Sapthagiri Hospital and college for research	9	400
6	2019-20	Educational Camp Visited to Hesaraghatta horticulture office -NSS	NSS	5	48
7	2019-20	Special lecture on biodiversity in view of World environmental day celebration	Green Club -R R Institute of Technology	5	63
8	2019-20	Germination programme at S.S Ghati	Green Club -R R Institute of Technology	06	10
9	2019-20	Engineer's day and ozone day celebration	Green Club -R R Institute of Technology	02	99
10	2019-20	Rally on Environmental awareness Program	Green Club -R R Institute of Technology	07	200
2018-19					
11	2018-19	Environmental Awareness program- Government School Mandya.	Green Club - RRIT	2	20
12	2018-19	World Forestry day	Green Club - RRIT	25	100
13	2018-19	Drug Free India – by art of living.	Anti-Drug Abusing Committee - RRIT	15	78
14	2018-19	Blood Donation Camp and Eye Screeing Camp	LIONS CLUB - RRIT	7	200
15	2018-19	NSS camp at SIDDARABETTA	SIDDARABETTA MATT and RRIT	6	50
16	2018-19	Tobacco : A Threat to career and Life	Anti-Drug Abusing Committee - RRIT	7	40
17	2018-19	Plantation at RRIT	GREEN CLUB and NSS - RRIT	6	30
18	2018-19	World Heart Day	CSE RRIT SIMSRH	6	168
19	2018-19	Swachh Bharat Abhyan (Shramadhan) at Hesaraghatta lake	NSS - RRIT	10	130
20	2018-19	World Organ Donation Day	Electronics and Communication	11	120
2017-18					
21	2017-18	Student sensitization program on energy conservation	IQAC Energy club RRIT	06	70
22	2017-18	Blood Donation camp	Mediscope Blood Bank and RR Institute of Technology	05	244
23	2017-18	New India Pledge	RR Institute of Technology	3	96
24	2017-18	Rashtriya ekta diwas	IT Club-RR Institute of Technology	04	40

25	2017-18	NSS Swachh Bharath Shramadhan	NSS-RR Institute of Technology	2	45
26	2017-18	Expert talk on gender sensitization	Internal Complaint Committee-RR Institute of Technology	06	70
27	2017-18	Sadbhavana Diwas	RR Institute of Technology	10	114
28	2017-18	Cyber Crime Awareness program	RR Institute of Technology	10	50
29	2017-18	Digital India	RR Institute of Technology	03	29
30	2017-18	75 Anniversary of Quit India Movement	RR Institute of Technology	05	79

Table 9.7(v): Student Participation in Extension Activities for the year 2019-20, 2018-19 and 2017-18

Sl. No.	Academic Year	Name of the scheme	Organising unit/Agency/Collaborating Agency	Name of the activity	Number of teachers participated in such activities	Number of students participated in such activities
				2019-20		
1	2019-20	Environmental Awareness	Green Club	Rally on Environmental Awareness	7	200
2	2019-20	Awareness Program	Reverse Logistics (MHRD initiative)	Awareness Program on Environmental hazards of E-Waste	3	91
3	2019-20	Awareness Program	EEE-RRIT (AICTE-initiative)	Sadbhavana Divas Day	25	100
4	2019-20	Awareness Program	Green club-RRIT	Engineer's day and ozone day celebration	2	99
5	2019-20	Awareness Program	Green Club RRIT	Germination programme at S.S Ghati	6	10
6	2019-20	Awareness Program	ECE-RRIT	Awareness quiz on COVID_19	2	74
7	2019-20	Awareness Program	IQAC-RRIT	Covid-19 Awarenss	2	100
8	2019-20	Awareness Program	IQAC –Yoga Club RRIT	Importance of Yoga In Day to Day life	4	115
9	2019-20	World environmental day	Green Club-R R Institute of Technology	Special lecture on biodiversity in view of World environmental day celebration	5	63
10	2019-20	Awareness Programme	NSS -RRIT	Electric Shock first aid and prevention	6	150
11	2019-20	Awareness Programme	ECE-RRIT	First Aid in case of accidents	2	105
12	2019-20	Environmental Awareness	NSS	Environmental awareness program at Government School	2	100
13	2019-20	Covid Awareness	QAC- RRIT	Corona virus precautionary measures	102	-
				2018-19		
14	2018-19	Awareness Program	Green Club - RRIT	Enviormental Awareness program-Government School Mandya.	2	20
15	2018-19	Awareness Program	Green Club - RRIT	World Forestry day	25	100
16	2018-19	Awareness Program	LIONS CLUB - RRIT	Blood Donation Camp and Eye Screening Camp	7	200
17	2018-19	Awareness Program	SIDDARABETTA MATT and RRIT	NSS camp at SIDDARABETTA	6	50
18	2018-19	Awareness Program	Anti-Drug Abusing Committee - RRIT	Drug Free India – by art of living.	15	78
19	2018-19	Awareness Program	Anti-Drug Abusing Committee - RRIT	Tobacco : A Threat to career and Life	7	40

20	2018-19	Awareness Program	GREEN CLUB and NSS - RRIT	Plantation at RRIT	6	30
21	2018-19	Awareness Program	CSE Department in Association with SIMSRH	World Heart Day	6	168
22	2018-19	Awareness Program	ECE - RRIT	World Organ Donation Day	11	120
23	2018-19	Swachh Bharat A bhyan (Shramadha n)	NSS - RRIT	Swachh Bharat A bhyan (Shramadha n) at Hesaraghatta cleaning the surrounding of Reservoir	10	130
2017-18						
24	2017-18	Extension activity	IQAC Energy club RRIT	Student Sensitization program on energy conservation	6	40
25	2017-18	Extension activity	Mediscope Blood Bank and RR Institute of Technology	Blood Donation camp	4	244
26	2017-18	Extension activity	RR Institute of Technology	New India Pledge	3	96
27	2017-18	Extension activity	RR IT Club-RR Institute of Technology	Rashtriya ekta diwas	4	40
28	2017-18	Extension activity	NSS-RR Institute of Technology	NSS Swachh Bharath Shramadhan	2	45
29	2017-18	Extension activity	Internal Complaint Committee- RR Institute of Technology	Expert talk on gender sensitization	6	70
30	2017-18	Extension activity	RR Institute of Technology	Sadbhavana Diwas	10	114
31	2017-18	Extension activity	RR Institute of Technology	Cyber Crime Awareness program	10	50
32	2017-18	Extension activity	RR Institute of Technology	Digital India	3	29
33	2017-18	Extension activity	RR Institute of Technology	75 Anniversary of Quit India Movement	05	79

Table 9.7(vi): Awards & Recognition received for extension activities					
Sl. No.	Academic Yaer	Name of the Activity	Award/recognition	Awarding Bodies	No. of Students Benefited
1	2019-20	Blood donation camp	Recognition	Lion's club blood bank	150
2	2018-19	Blood Donation and EYE screening camp	Recognition	Lions Club Blood Bank	200
3	2017-18	Blood donation Camp	Recognition appreciation	Mediscope Blood Bank	244
4	2017-18	lab Blind Empowerment Champions 2017	Awarded in recognition of voluntary contribution for the empowerment of visual challenges	Indian Association For The Blind	16

Table 9.7(vii): Awards & Recognition received by students for participation in extension activities

Awards & Recognition For Students					
Awards					
Year	Name of the award/ medal	National/ International	Sports	Student ID number	Name of the student
2019	Mysore Dasara	State	Yoga	1RI15CS002	Akshay N Mohan
2019	KSLOC	State	Yoga	1RI15CS002	Akshay N Mohan
2019	National level open yoga championship	National	Yoga	1RI15CS002	Akshay N Mohan
2019	Yoga siriprabodhapatra	National	Yoga	1RI15CS002	Akshay N Mohan

C. Annual Students Activities	
The Table 9.7(viii) below shows the annual students activities.	
Table 9.7(viii) Annual Students Activities	
Sl. No.	Events
CULTURAL EVENTS	
1	Solo Singing(Non classical)
2	Solo dance(Classical)
3	Solo dance(Western)
4	Group Dance(Non Classical)
5	Group Singing(Non classical)
6	Group Dance(Classical)
7	Solo Singing
8	Event 1- Group dance
9	Event 2- Fashion Show
10	Event 3- Group singing
11	Fireless cooking
12	Gaming
13	Flower arrangement
14	Hairstyle
15	Mehandi competition
16	Painting
17	Pencil sketch
18	Photography
19	Pot painting
20	Rangoli
21	Short movie
22	Tik tok
23	Treasure hunt
24	Vegetable curving
25	Wolf of wall street
26	Debate competition(anti-drugs committee)
27	Awareness Quiz on Pandemic
28	Chess
29	Carom
30	Table Tennis
31	Badminton

32	Foot Ball
33	Throw Ball
34	Volley Ball
35	Kabaddi
36	Cricket
37	Cricket
38	100 mts
39	200 mts
40	400 mts
41	800 mts
42	Shot Put
43	Discuss Throw

10 GOVERNANCE, INSTITUTIONAL SUPPORT AND FINANCIAL RESOURCES (120)

Total Marks 95.00

10.1 Organization, Governance and Transparency (40)

Total Marks 37.00

10.1.1 State the Vision and Mission of the Institute (5)

Institute Marks : 5.00

Vision :
Vision of RR Institute of Technology (RRIT)
"To be a Premier globally recognized Institute with ensuring academic excellence,Innovation and fostering Research in the field of Engineering."
Mission :
Mission of RR Institute of Technology (RRIT)   • To consistently strive for Academic Excellence   • To promote collaborative Research & Innovation   • To create holistic teaching learning environment that build ethically sound manpower who contribute to the stake holders operating at Global environment

10.1.2 Governing body,administrative setup,functions of various bodies,service rules, procedures, recruitment and promotional policies (10)

Institute Marks : 10.00

- The Governing Council is the superlative administrative body of the college, It is constituted as per the norms given by AICTE, New Delhi; University affiliated and Govt. of Karnataka.
- The Governing Council overseas the growth of the college and set the framework of governance and approves strategic set to achieve the mission and vision of the institution, long term academic plans and annual budgets in accordance to meet the desires of the stakeholders.
- The principal is appointed as Executive member by Governing council as system of control to monitor overall performance and ensure growth of the institute to higher level.
- The council ensures that the principal maintains accountability including financial & operational and risk assessment; and also set procedure for handling internal grievances.
- Governing Council monitors overall activities of the institutions performance as per approved plans and sets the benchmarks for future academic plans and research activities by providing direction of implementation wherever possible to ensure the achievement of the mission and vision of the organization;
- Governing Council approves the budgetary allocation , recruitment process that support the head of the institution for smooth execution of the programmes.
- Frequency of meeting of the Governing Council is minimum two times a year or whenever needed.

Organization chart

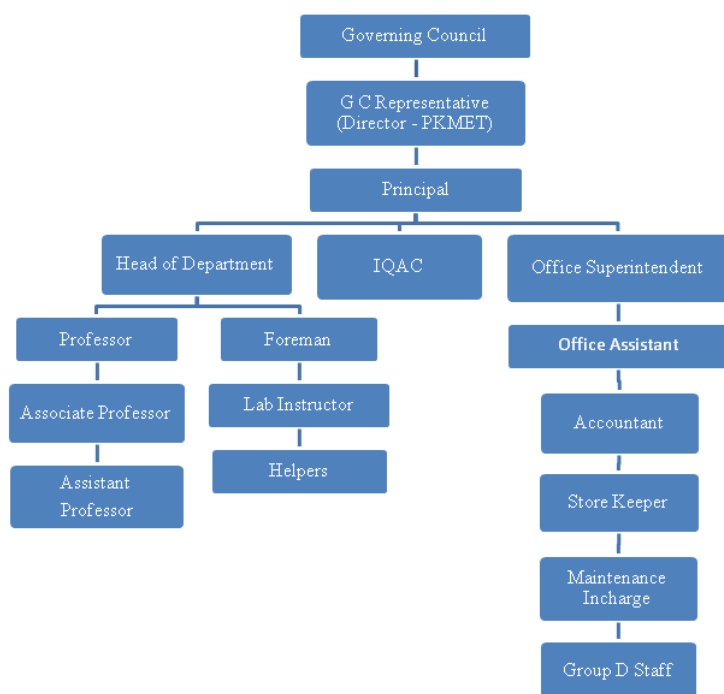The figure 10.1.2(a) shows the organization chart of R R Institute of Technology

Figure 10.1.2(a): Organiztion chart of RRIT

We at RRIT believe in co-operative kind of work culture. In particular, the concept of process owners, which facilitates a perfect decentralization of activities and delegation of authorities, has proven itself to be a key concept in the success achieved by the institute on different counts. Involvement of each and everyone in the decision-making at their respective levels is ensured. The functions of various key positions are depicted in table 10.1.2(i) and list of Governing Council Members are shown in 10.1.2(ii).

Table 10.1.2(i): The functions of various key positions

Position	Functions
Governing Council	• Frame directive principles and policies • Amend and approve policies from time to time • Approve budgets
G C Representative **Director**	• To look after the overall development of the institute • Mobilize external resources to strengthen the institute • Plan & provide for necessary facilities / equipments for development
Principal	• Design & define organization structure • Define & delegate responsibilities of various positions in the organization. • Ensure periodic monitoring & evaluation, of various processes & sub-processes • Ensure effective purchase procedure • Define quality policy and objectives • Prepare annual budget • Conduct periodic meeting of various bodies such as Governing Council, Academic Review, Anti Ragging, Standing Committee and Grievance Redressal Committee etc • Manage accounts and finance • Employee recruitment process • Office Administration • Compliance with AICTE, DTE & University • Admission • Internal and External examinations
Alumni Association	• Formation of alumni council • Arrange periodic meetings • Ensure alumni registration • Prepare alumni news letter • Organizing Alumni Meet

Role	Responsibilities
Office Superintendent	• Liasoning with AICTE, DTE and University • College register • Service Books • Faculty personal files • Recruitment process • Maintain minutes of meeting (all) • New proposals • Co – ordinate day to day activities of office • Purchase process • Annual College budget
Placement Officer	• Liaison with industry • Student Training and Placement drive • Identify and provide training needs of students • Arrange interviews • Ensures the smooth coordination with various stakeholders required for the process of placement
Librarian	• Maintains the library assets • Procure the necessary learning materials such as books, monographs, journals , e resources that meets the need of all stake holder
Director Physical Education	• Ensure smooth conduct of sports • Maintains and manages sports facility • Encourage students to participate in tournaments
Head of Departments	• Plan and execute academic activities and organizes events for overall development of the department • Maintain discipline and culture in the department • Co-ordinate the activities of class teachers • Organizes Faculty Development Programs.
Faculty members (Teaching Team)	• The primary role of faculty is disseminate the work allotted by head of the department time to time • Deliver lectures (theory classes) and conduct Lab sessions (Practical classes) as per the allotted Timetable. • Counsel and mentor the students, maintain Academic/Course files, plan and conduct tests, design assignments/projects for students, discharge examination duties, and assist co- curricular and extracurricular activities as assigned by the department • Carryout collaborative with industry and present papers, seek growth opportunities and participate in FDPs and update technical knowledge and keep abreast with developments in their domain
Admin Staff	Admin Staff are responsible for up keeping the office of the institute with all necessary documentation and records. They collectively are responsible for: • Maintenance of student and staff records • Undertake all responsibilities in recruitment and admission related requirements of the institute • Prepare correspondence with University and other statutory agencies and keep the record of the same

Table 10.1.2 (ii): List of Governing Council Members

Sl. No	Name	Designation & Affiliation	Role	Academic Year
1	Shri Y. Raja Reddy	Chairman, P.K.M.E. Trust	Chairman	
2	Shri H. R. Kiran	Secretary, P.K.M.E. Trust	Member	
3	Shri H.R. Arun	Trustee, P.K.M.E. Trust	Member	
4	Dr. K. Rajani kanth	Former Principal,MSRIT	Member	
5	Dr. K P J Reddy	Professor, Dept. of Aerospace, IISc.	Member	2017-18
6	Dr. U Ramesh	Regional Director	Member,AICTE Nominee	
7	Dr. Abdul Sharief	Principal, PACE, Mangalore	Member,VTU Nominee	
8	Sri. H. U. Talawar	Directorate of Technical Education	Member, DTE Nominee	

9	Sri. Giri M	Secretary, Peenya Industries Association	Govt. Nominee
10	Dr. M. S. Bhagyashekar	Principal, RRIT, Bangalore	Member Secretary

Sl. No	Name	Designation & Affiliation	Role	Academic Year
1	Shri Y. Raja Reddy	Chairman, P.K.M.E. Trust	Chairman	
2	Shri H. R. Kiran	Secretary, P.K.M.E. Trust	Member	
3	Shri H.R. Arun	Trustee, P.K.M.E. Trust	Member	
4	Dr. K. Rajani kanth	Former Principal,MSRIT	Member	
5	Dr. K P J Reddy	Professor, Dept. of Aerospace, IISc.	Member	
6	Dr. U Ramesh	Regional Director	Member,AICTE Nominee	
7	Dr. Abdul Sharief	Principal, PACE, Mangalore	Member,VTU Nominee	
8	Sri. H. U. Talawar	Directorate of Technical Education	Member, DTE Nominee	
9	Sri. Giri M	Secretary, Peenya Industries Association	Govt. Nominee	2018-19
10	Sri Somashekar H L	Retd.Additional Controller, Accounts Department, Govt. of Karnataka	Member	
11	Dr. M. B Manjunath	Principal, RRIT, Bangalore	Member Secretary	

Sl. No	Name	Designation & Affiliation	Role	Academic Year
1	Shri Y. Raja Reddy	Chairman, P.K.M.E. Trust	Chairman	
2	Shri H. R. Kiran	Secretary, P.K.M.E. Trust	Member	
3	Shri H.R. Arun	Trustee, P.K.M.E. Trust	Member	
4	Dr. K. Rajani kanth	Former Principal,MSRIT	Member	
5	Dr. K P J Reddy	Professor, Dept. of Aerospace, IISc.	Member	
6	Dr. U Ramesh	Regional Director	Member,AICTE Nominee	
7	Dr. Abdul Sharief	Principal, PACE, Mangalore	Member,VTU Nominee	
8	Sri. H. U. Talawar	Directorate of Technical Education	Member, DTE Nominee	
9	Sri. L. N Prasad	Lakshmi Vacuum Technologies Pvt. Ltd. Peenya Industries	Govt. Nominee (Industrialist/Technologist/ Educationalist)	2019-20
10	Sri. Somashekar H L	Retd.Additional Controller, Accounts Department, Govt. of Karnataka	Member	
11	Dr. Srinivas G Bhat	Principal, RRIT, Bangalore	Member Secretary	

Major Responsibilities of the Governing Council

- Uphold the legal structure of the college to satisfy the norms of AICTE, UGC, State Government and affiliating University (VTU)or any other body or agency.

- To take decisions regarding the intake ,recruitment and addition or discontinuation of any program and take formal steps with the affiliating body and prepare action plan
- Approve the budget and recommend necessary corrections.
- Nominate and constitute committees for smooth discharge of responsibilities

Functions of Governing Council: The Governing Council shall exercise powers and discharge the functions as follows:

- To ensure management of institutional assets like land and maintenance of infrastructure, equipment, including loans and grants received from AICTE, Central Government and Government of Karnataka.

- To ensure implementation of acts, instructions , rules and regulations prescribed by AICTE and Government of Karnataka in matters of service conditions of staff relating to appointment, leave, Provident Fund, age of retirement and disciplinary actions.

- Set the rule to utilize building, land, furniture and for running AICTE approved courses in the institute the compliance of instructions issued by AICTE, Government of Karnataka and affiliating University are satisfied.
- To submit reports and returns statement to AICTE, Government of Karnataka and affiliating University as and when it is required
- Create ragging free campus for peaceful and favourable atmosphere for study.

B. Service Rules, Policies and Procedures

The service rules, policies and procedures are well defined by R R Institute of Technology. The service rules is approved by Governing Council .same is communicated to employees on Joining to the institute. The institute encourages the faculty by giving various awards based on performance appraisal procedures set by Institute and various schemes are in practice for the welfare of the staff.

.

C. Minutes of Meetings

The GC Meetings held frequently as shown in below table 10.1.2(iii) and evidences of meetings are shown in figure 10.1.2(b)

Table 10.1.2(iii): GC Meeting Details

Sl. No	Academic Year	No of Meetings
1	2017-18	2
2	2018-19	2
3	2019-20	1

10.1.3 Decentralization in working and grievanceredressal mechanism (10)   Institute Marks : 9.00

Decentralization in working and Grievance Redressal Mechanism.

An administrative body is set up in the Institution to make the campus ragging free , eradicate harassment and to address the grievances of students and staff. The head of the committee and members are nominated by Head of the Institution to oversee the process and maintain strict vigil in all the activities carried out at the institute. Principal holds a meeting with all the members and brief the importance of the committee and also the responsibility of each members . The members are advised to implement their task diligently and periodically update the report to the head of the committee and during any unforeseen incidents an emergency meeting is conducted in the presence of Head of the Institution to discuss and the action is taken accordingly.

The management has delegated its authority to the Principal. The principal in-turn has delegated the powers to committee Heads and committee members. All these committees work independely and implement need based action into force for the upliftment of the college.

Sl.no	Name of the Committee	Head of the Committee
1.	Academic Review (Acadamic Council) Committee	Dr. Mahendra K V Principal
2.	Research & Development	Dr. Mahendra K V Principal
3.	Students Progress/ Counselling /Communication (Proctoring)	Dr. Sunitha H D Professor & HOD ECE
4.	Ed Cell/ Students Projects Committee/Internship/Innovation	Dr. Manjunatha G Associate Professor, Mech
5.	Nba /Vtu/ Aicte/ Naac Coordinator/ Nirf	Prof. Parimala Gandhi G Associate Professor Dept. of ECE & Dr. Niranjan R Chougala Prof. Dept. of ISE
6.	Placement Committee	Dr. Sumanth V HOD, Dept.of ISE
7.	Certificate Program Committee	Prof. Mohan Kumar B N , Assistant Prof, Dept. of ECE
8.	Alumni Committee	Prof. Deepika Assistant Prof, Dept. of Civil
9.	Purchase Committee	Dr. Mahendra K V ,Principal
10.	Edusat Programme Committee	Prof. Dhananjaya M K Assistant Prof, Dept. of CSE
11	Student Attendance Management Committee	Dr. Naveen M, Assistant Prof. Dept. of ISE
12	Library Committee	Dr. Amarnath G, Professor, Dept. of ME
13	Sports & Yoga Committee	Dr. Naveen M, Assistant Prof. Dept. of ISE

14	Cultural Committee	Prof. Shruthi S, Prof. Assistant Prof. Dept. of CSE
15.	Anti- Ragging Committee	Dr. Mahendra K V , Principal
16.	Anti Ragging Squad	Dr. Niranjan R Chougala Prof. Dept. of ISE
17.	Grievance Redressal Committee	Dr. Mahendra K V , Principal
18	Sc/St	Dr. Sunitha H D, Hod ECE
19	Nss/ Green Club	Prof. Gunasheela P Assistant Prof Civil
20	Redcross	Prof. Chitharanjan Das V (ECE)
21	Icc /Anti Sexual Harassment	Prof. Parimala Gandhi G Associate Professor Dept. of ECE
22	Magazine Department Newsletter/ Journal Committee	Dr Manjunath, HOD, Dept of CSE
23	Media/Web Page/ Branding Coordinator	Dr. Sumanth V , HOD, ISE
24	Energy Club	Dr. Chanabasavaraju, HOD ME
25	Hostel & Canteen Committee/ Transport Committee	Prof. Dhananjaya M K , Assistant prof Dept. CSE

GRIEVANCE REDRESSAL COMMITTEE

students who come from various backgrounds to study face a lot of problems and many distractions to take them off from their learning path. Thus to address the problem the students grievance redressal cell is formed to resolve the issues of the students. To receive grievance from students, Parents & others concerned college has hosted a link inthe webpage which comes into the preview of principal and committee. The committee will investigate into the matter and shall try to resolve it as quickly as possible . The composition of the committee is as follows.

.(https://www.rrit.ac.in/committees-grievance.php)

Sl. No	Name	Designation & Department	Role
1	Dr. Mahendra K V	Principal	Chairman
2	Dr. Channabasavaraj S(ME)	Professor & Head,ME	Convener
3	Dr. Gullapalli Sankara (CV)	Professor & Head,CV	Member
4	Dr. Sunitha H D (ECE)	Professor & Head,ECE	Member
5	Dr. Manjunath R (CSE)	Professor & Head,CSE	Member
6	Mr. Emmanuel Rajarathnam (ISE)	Associate Professor,ISE	Member
7	Dr. Mangala Gowri S G (EEE)	Associate Professor, EEE	Member
8	Dr.V Ramachandramurthy(BS)	Professor & Head,BS	Member

Mechanism followed by Grievance Redressal Committee:
1. Student / Parent/Staff register their Grievance to the committee
2. The Committee holds a meeting and analyze the registered grievance and its impact
3. Resolve the issue and give feasible solution to registrant
4. Initiate necessary plan to eradicate the raised grievance raised in future

ANTI- RAGGING COMMITTEE

The College has an Anti - Ragging committee to curb the ragging in the campus and make the campus ragging free. In case if any student is found encountering such activity, the students who affected can report to members of the Anti - Ragging committee. The composition of the committee is as follows.

Sl No	Name	Designation & Department	Role
01	Dr. Mahendra K V	Principal	Chairman
02	Dr. V Ramachandramurthy(BS)	Professor & Head, BS	Convener
03	Dr. Channabasavaraj S(ME)	Professor & Head, ME	Member
04	Dr. Gullapalli Sankara (CV)	Professor & Head, CV	Member
05	Dr. Sunitha H D (ECE)	Professor & Head, ECE	Member
06	Dr. Manjunath R (CSE)	Professor & Head, CSE	Member
07	Mr. Ramachandra C (EEE)	Professor & Head, EEE	Member
08	Mr. Emmanuel Rajarathnam (ISE)	Assistant Professor	Member
09	Mr. Srinath N Ramesh (BW)	Boys Warden	Member
10	Ms. Ritabahun Syiemlieh (GW)	Girls Warden	Member

Mechanism followed by Anti Ragging Committee:
1. If any student is affected due ragging , raise a complaint to any of the committee members
2. On receipt of complaint , the chairman of the committee hold meeting with members students complained and students who indulged ragging
3. Committee registers statement of complainant and   respondent and thoroughly scrutiny the reviews and suggest feasible solution to the complainant by keeping respondent student future in to consideration.
4. Committee educate students about the impact if one involves in ragging and its consequences through awareness program.

5. The details of committee is displayed in all prominent places in the campus as well as in webpage, this enables students to reach the committee immediately if they face any problem due to ragging.

ANTI RAGGING SQUAD:

The College has an Anti - Ragging Squad which keeps vigil round the clock in the campus to prevent the occurrence of ragging in the campus . The composition of the committee is as follows.

Sl. No	Name	Designation & Department	Role
1	Dr. Mahendra K V	Principal	Chairman
2	Mr. Deepak A R (ME)	Assistant Professor, ME	Convener
3	Ms. Sharmila H C (CV)	Assistant Professor, CV	Member
4	Dr. Sumanth V (ISE)	Associate Professor, ISE	Member
5	Mrs. Swetha K B (ISE)	Assistant professor, ISE	Member
6	Mr. Vyshnav B (EEE)	Assistant professor, EEE	Member
7	Mrs. Charutha M V (ECE)	Assistant professor, ECE	Member

Mechanism followed by Anti Ragging squad Committee:

1. A schedule is prepared by head of the committee in consultation with all the members to go for squad duty and continuously keep vigil over ragging to prevent its occurrence and recurrence
2. As per schedule the members will visit all prominent places where the lower and higher semester students meet to curb the menace of ragging.
3. Committee ensures display Pamphlets of Anti ragging, Observation of Anti ragging in the campus including hostel, Night inspection of hostels.
4. Organize pledge/oath ceremonies against anti-ragging & drug abuse.

INTERNAL COMPLAINT COMMITTEE/ANTI SEXUAL HARASSMENT COMMITTEE

Internal complaint committee is formed to address the internal issues that arise within in the college of the faculties / students and give solutions to the various issues raised internally. Suggestions and remedies are given by the members to tackle the problems that arise.

Sexual Harassment is a major issue and very sensitive, the students who face such problems will not be in a mind-set to share these issues with anyone. This committee is constituted to address the students how to overcome such problems . Powers are given to the committee to take stringent action on students if anyone involve in such activities. The committee is constituted as follows.

Sl. No	Name	Designation & Department	Role
1	Mrs. Parimala Gandhi G (ECE	Associate professor,ECE	Chairman
2	Dr. Anita R Shettar(BS)	Associate professor,BS	Convener
3	Mr. Girish G (CV)	Assistant professor, CV	Member
4	Mrs. Veena V (CSE)	Assistant professor, CSE	Member
5	Dr. Mangala Gowri (EEE)	Associate professor, EEE	Member
6	Mrs. Chaitra K S (Office)	Office Assistant, OF RRIT	Member
7	Dr. Padmakshi Lokesh	External meber, NGO	Member

Mechanism followed by Internal Complaint Committee / Anti Sexual Harassment Committee

1. Address the Needs and problems of Girls student, women faculty members , resolve the complaints if any,
2. Organize events to emphasis importance of gender equity Seminars
3. Arrange counselor to address the issues and to prevent the harassment at college
4. Motivate Women members or girl students to speak out their issues boldly to get issues shorted if any
5. Organize events to educate importance of oral talk , words that lead to unwelcome sexual advances, unsolicited acts of physical intimacy.
6. The Committee solves the issues if any internally and suggest feasible solution by keeping students future in mind.

10.1.4 Delegation of financial powers (10)   Institute Marks : 8.00

Delegation of power process for Financial Management

Institution financial powers delegated to the Principal, Heads of Departments and relevant in-charges.

For smooth running of the department budgets are very essential.

Budgets are prepared before the commencement of the academic year by every department. In this regard, Heads of the Departments, submits the budget proposal to the Principal with request regard to stationery, lab requirements, etc, for which budget allocations are approved by the Principal in discussion with the Management. On the same lines, proposals for procuring new equipment for the labs, interactive technologies in the classrooms, conduction of workshops/ conferences/ seminars by the Heads of Departments for which proposals are submitted and same is approved and fund allocations are made.

Pre-amble:

The Institution generates funds through Fees, Interest on the capital & the expenditure is based on the budget request from departments, also based on institutional budget.

- For each financial year the budget requisitions are prepared by the department & submitted to the Head of the Institution for approval at the start of the financial year.
- The Head of the Institution hold a meeting with heads of the department to finalize the requirements.

Delegation of Financial power & utilization by various authorities

Principal: The Principal is the final decision making authority on all department & Institution requirements, Prepares Institutional budget proposal for financial year and get approval in G C Meeting.

- All the financial approvals will be sanctioned on the recommendation of the HODs and Principal.
- Instructing office superintend to dispose Cheque to students for the Scholarship fund received from various government organizations.
- The budget allocated by the Management on the basis of the budget estimates submitted by the college is adequate to meet the recurring and non-recurring expenditure.
- Signing Authority for Department Association Accounts.

Accountants: Preparation of budget proposal for Institution for financial year.

- Based on the approval from Principal ,accountant release funds to various vendors/suppliers/petty contractors/distributors etc. throughout financial year
- Manage all accounts related to PF/salary, Insurance, Rental, IT, Taxes, Billings etc.

HOD: preparation of budget proposal for financial year.

- Recommending & forwarding authority for all the department requirements and initiate the process of purchase.
- In exigencies & emergency initiating request for purchase/procurement of all requirements of department.
- HODs are the recommending authority for Department Association Account.

10.1.5 Transparency and availability of correct/unambiguous information in public domain (5)

Institute Marks : 5.00

RULES & REGULATIONS

1. All students should attend the classes start from the reopening day of the Semester.
2. Students should be punctual , regular for lecture classes, laboratories, workshops, seminars etc., and any other activity organized by the college.
3. Students shall be attentive in all classes and labs without creating any disturbance to fellow students
4. Students shall compulsorily wear their identity cards when they are in the college campus.
5. Loss / theft of ID cards / library cards and change of address or contact number shall be informed to HOD / college office without delay.
6. Use of mobile phones, iPods, and walkman are strictly banned inside the campus.
7. Any kind of indecent or tight fitting dresses are not permitted.
8. Students shall maintain strict discipline and good behavior at all times in campus
9. Smoking, chewing of pan masala / gutka consuming alcoholic drinks and drugs of any kind in the campus are strictly prohibited.
10. Strike or any such undesirable activities in the campus are not permitted and those
    involved in such activities will be severely punished.
11. Tuition fees shall be paid within as per circular set by college after the reopening of the odd semester in every academic year.
12. Students shall take prior permission from HOD before availing leave.
13. Attendance condonation will be given as per University Norms.
14. Leave / Permission letters to be signed by parents/guardians/ hostel wardens.
15. Students are encouraged to participate in co-curricular and extracurricular activities and develop their skills.
16. Students are counseled periodically regarding academic performance, higher studies, placement, attendance, discipline etc.
17. Hostel students shall abide by the rules and regulations of the hostel.
18. Students are advised to wear helmets while riding two wheeler vehicles.

ACADEMIC RULES

1. Students shall submit their assignments, records, observation notebooks etc. within the specified time.
2. Attendance condonation will be given as per University Norms.
3. Students shall equip themselves with approved drawing material, instrument boxes and record note books as required.
4. Student are advised to handle Lab equipments with care. Loss or damage attracts penalty.
5. Students have to use college official lab record books to write the practical record. No other notebook shall be permitted.
6. Students are encouraged to participate in conferences, workshops, seminars and technical paper presentation.
7. To ensure good Internal assessment marks and overall academic performance attendance is mandatory for all the internal tests.

EXAM RULES AND REGULATIONS SET BY AFFILIATING UNIVERSITY

1. Only a single answer book will be issued. No additional answer books are permitted.
2. Answer books should be handed over personally to room superintendent before leaving the examination hall.
3. The candidate should not take any books / notes, log tables, scribbling pads, cell phones, programmable calculators or any kind of references into the examination hall.
4. No candidate shall be admitted into the Exam hall after the commencement of the examination.
5. No candidate shall be allowed to leave the examination hall before 30 minutes after commencement of the examination.
6. The candidate should append his / her signature at the specified space on the answer book as and when he / she received the answer book
7. Answer books should be handed over personally to room superintendent before leaving the examination hall.
8. The student leaving the examination hall till 30 minutes before the scheduled completion time of the examination shall not be permitted to take the question paper.
9. Students are strictly instructed not to write any matter on the question paper except their USN.
10. The candidate should append his / her signature at the specified space on the answer book as and when he / she received the answer book.

Any candidate appearing for UG / PG examination is liable to be charged for committing malpractice in the following cases

1. Possessing any written matter on any paper, scribbling pad, question paper, admission ticket, calculator, palm, hand, leg, kerchief, clothes, etc.
2. Copying from the material of another candidate or similar aid, or assistance is rendered to another candidate
3. Supply of copying material from inside or from outside the examination hall.
4. Unruly behavior inside or near the examination hall.
5. Communicating with any candidate or any other person inside or outside the examination hall.
6. For more detailed information on academic regulation please refer to VTU website: www.vtu.ac.in

10.2 Budget Allocation, Utilization, and Public Accounting at Institute level (30)   Total Marks 22.00

10.2.3 Availability of the audited statements on the institute's website (5)   Institute Marks : 5.00

Institutional audit statements are available on the institute's website.

10.2.1 Adequacy of budget allocation (10)   Institute Marks : 7.00

Adequacy of budget allocation

- **The department prepares the budget on recurring and non recurring details and submit to Head of Institution.**
- **The HeadofInstitution prepares budget by keep in view of Departmental requirements, Salary component, Infrastructural Development and Additional requirements and also considereing the previous year expenditure.**
- **The prepared budget will be submitted to GC Meeting for Approval.**

Table 10.2.1 Budget allocation

Financial Year	Approved Budget (In Lakhs)	Adequate/Not Adequate
2020-2021	750	Adequate
2019-2020	850.2	Adequate
2018-2019	1010	Adequate
2017-2018	890.2	Adequate

10.2.2 Utilization of allocated funds (15)   Institute Marks : 10.00

Table 10.3.2(i) Utilization of allocated funds

Financial Year	Approved Budget (In Lakhs)	Actual Expenditure (In Lakhs)	Percentage of Utilization
2020-2021	750	627.94	83.72
2019-2020	850.2	788.18	92.70
2018-2019	1010	957.29	94.78
2017-2018	890.2	842.78	94.67

Summary of currentfinancial year's budget and actual expenditure incurred(for the institution exclusively)in the three previous financial years

Total Income at Institute level: For CFY,CFYm1,CFYm2 & CFYm3
CFY : (Current Financial Year),
CFYm1 : (Current Financial Year minus 1),
CFYm2 : (Current Financial Year minus 2) and
CFYm3 : (Current Financial Year minus 3)

Table 1 - CFY 2020-21

Total Income 642.53				Actual expenditure(till…): 627.94			Total No. Of Students 890
Fee	Govt.	Grants	Other sources(specify) 0	Recurring including salaries	Non Recurring	Special Projects/Anyother, specify 0	Expenditure per student
560.15	0	0	82.38	627.70	0.24	0	0.71

Table 2 - CFYm1 2019-20

Total Income 822.38				Actual expenditure(till…): 788.18			Total No. Of Students 840
Fee	Govt.	Grants	Other sources(specify) 0	Recurring including salaries	Non Recurring	Special Projects/Anyother, specify 0	Expenditure per student
598.38	0	0	224	779.52	8.66	0	0.94

Table 3 - CFYm2 2018-19

Total Income 957.29				Actual expenditure(till…): 957.29			Total No. Of Students 996
Fee	Govt.	Grants	Other sources(specify) 0	Recurring including salaries	Non Recurring	Special Projects/Anyother, specify 0	Expenditure per student
669.02	0	0	288.27	878.52	78.77	0	0.96

Table 4 - CFYm3 2017-18

Total Income 854.08				Actual expenditure(till…): 842.78			Total No. Of Students 895
Fee	Govt.	Grants	Other sources(specify) 0	Recurring including salaries	Non Recurring	Special Projects/Anyother, specify 0	Expenditure per student
811.37	0	0	42.71	781.26	61.52	0	0.94

Items	Budgeted in 2020-21	Actual Expenses in 2020-21 till	Budgeted in 2019-20	Actual Expenses in 2019-20 till	Budgeted in 2018-19	Actual Expenses in 2018-19 till	Budgeted in 2017-18	Actual Expenses in 2017-18 till
Infrastructure Built-Up	0	0	0	0	0	0	0	0
Library	11	6.42	3	1.97	77	94.81	22	20.81
Laboratory equipment	1	0.23	6.5	4.28	79	62.72	43.5	38.29
Laboratory consumables	10	9.05	10	8.6	12	10.12	7.5	6.82
Teaching and non-teaching staff salary	250	200.75	350	327.66	400	394.95	400	397
Maintenance and spares	65	60.46	65	60.39	50	40.4	42	39.94
R&D	10	7.19	10	9.03	15	13.57	12	10.46
Training and Travel	18	12.55	30	26.9	47	19.31	42	26.74
	160	127.42	30	182.77	80	210.91	75	239.33
Others, specify	225	203.86	345.7	166.58	250	110.50	246.2	63.39

Total	750	627.93	850.2	788.18	1010	957.29	890.2	842.78

10.3 Program Specific Budget Allocation, Utilization (30)   Total Marks 20.00

10.3.2 Utilization of allocated funds (20)   Institute Marks : 15.00

Utilization of allocated funds

Financial Year	Approved Budget(In Lakhs)	Actual Budget(In Lakhs)	Percentage of Utilization
2020-2021	165	143.91	87.21%
2019-2020	161	143.56	89.16%
2018-2019	150.02	130.68	87.10%
2017-2018	136.45	116.85	85.63%

10.3.1 Adequacy of budget allocation (10)   Institute Marks : 5.00

Adequacy of budget allocation

Financial Year	Approved Budget	Adequate/Non-Adequate
2020-2021	165	Adequate
2019-2020	161	Adequate
2018-2019	150.02	Adequate
2017-2018	136.45	Adequate

Institute Marks :

Total Income at Institute level: For CFY,CFYm1,CFYm2 & CFYm3

CFY: (Current Financial Year),

CFYm1 : (Current Financial Year minus 1),

CFYm2 : (Current Financial Year minus 2) and

CFYm3 : (Current Financial Year minus 3)

Table 1 :: CFY 2020-21

165.00		Actual expenditure (till…): 143.91		Total No. Of Students 242
Non Recurring	Recurring	Non Recurring	Recurring	Expenditure per student
162.00	3.00	143.81	0.10	0.59

Table 2 :: CFYm1 2019-20

161.00		Actual expenditure (till…): 144.94		Total No. Of Students 202
Non Recurring	Recurring	Non Recurring	Recurring	Expenditure per student
158.00	3.00	143.55	1.39	0.72

Table 3 :: CFYm2 2018-19

150.02		Actual expenditure (till…): 130.68		Total No. Of Students 214
Non Recurring	Recurring	Non Recurring	Recurring	Expenditure per student
147.02	3.00	130.20	0.48	0.61

Table 4 :: CFYm3 2017-18

136.45		Actual expenditure (till…): 116.85		Total No. Of Students 175
Non Recurring	Recurring	Non Recurring	Recurring	Expenditure per student
125.95	10.50	109.73	7.12	0.67

Items	Budgeted in 2020-21	Actual Expenses in 2020-21 till	Budgeted in 2019-20	Actual Expenses in 2019-20 till	Budgeted in 2018-19	Actual Expenses in 2018-19 till	Budgeted in 2017-18	Actual Expenses in 2017-18 till
Laboratory equipment	1	0.10	1	0.38	10	7.11	1	0.38
Software	0.5	0.49	0.5	0.34	0.5	0.35	0.5	0.49
Laboratory consumable	1.00	0.13	0.5	0.4	0.5	0.12	0.5	0.35
Maintenance and spares	0.5	0.42	0.5	0.28	0.5	0.32	0.6	0.45

R & D	1.5	1.2	0.50	0.4	1.00	0.65	0.50	0.37
Training and Travel	0.5	0.41	0.8	0.62	0.65	0.59	0.8	0.62
	160	141.16	157.2	141.14	136.87	121.54	132.55	114.19
Total	**165.00**	**143.91**	**161.00**	**143.56**	**150.02**	**130.68**	**136.45**	**116.85**

10.4 Library and Internet (20)   Total Marks 16.00

10.4.1 Quality of learning resources (hard/soft) (10)   Institute Marks : 8.00

A. Availability of Relevant Learning Resources including E-resources & Digital Library

The library books of current titles, volumes, print resources and other relevant learning materials are procured on the recommendations of department heads. The number of volumes and titles are added every year in accordance with the norms and standards set by AICTE and VTU from time to time.

Budget formulation: Library Committee will conduct a meeting and prepare a budget plan for the next academic year. The budget plan will be submitted to the management through the principal.

a. **Procurement process of the print books:** The library through the library committee will send a request to all the departments requesting them to submit the list of books to be procured for the library for the next semester. The departments send the list of books including reference and textbooks as per the latest syllabus to the library. The Librarian gets quotations for the list of books from at least three vendors.

A comparative statement of quotations along with the list of books and quotations will be submitted to the management through the Principal.

The selected vendor will be asked to submit the Performa invoice after which the books will be purchased with due payment.

b. **Accessibility to the students:** The library books procured will be entered in the accession register; given class numbers as per Dewey Decimal Classification (DDC) classification and arranged open access in the racks likewise. The books are kept programme-wise in the racks. In each programme, the books are arranged as per DDC classification.

A rack guide having alphabetical list of topics with the corresponding rack number is provided in each department racks to facilitate easy access of the books to the students.

Student also can check the availability of books in WEBOPAC provided through QR code 24x7.

c. **Procurement process of print journals:** Procurement process of print journals is similar to that of print books. The list of print journals sent by the departments as per AICTE guidelines will be subscribed according to the calendar year. Bound volumes of the journals are maintained.

d. **Project reports:** The students who complete project works are mandated to submit a hard copy of their project report to the library which will be maintained in the library.

Details on library books:

As per the data, at the end of 2020, we have

Sl. No.	Titles	Volumes
1.	7747	12733

Details on print journals:

Sl. No.	Titles
1.	37

The following print journals were subscribed from 2017 to 2020.

Sl. No	Titles of Journals	ISSN
1	Asian Journal of Computer science and Technology	2249-0701
2	International Journal of Advanced Computer in Engineering	0974-5785
3	International Journal of Computer science and Communication	0973-7391
4	International Journal of Soft Computing Bio Informatics	0975-816x
5	Journal of Advanced Research in Computer Engineering	0974-4320
6	Journal of Neural Computing System	0974-4401
7	Asian Journal of Information science and Technology (OA)	2231-6108
8	Indian Journal of Information Sources and Services (OA)	2231-6094
9	International Journal of Information Analysis and Processing	0973-5712
10	International Journal of Information Technology and Knowledge Management	0973-4414
11	Journal of Analysis and Computation	0973-2861
12	Journal of Hybrid Computing Research (JHCR	0974-5858

Digital library Learning Resources:

Learning resources include e-resources subscribed under VTU e-consortium, DELNET, National Digital Library of India and Institutional Repository and K-Nimbus digital library.

i. **VTU e-consortium:** RRIT has been subscribing to VTU e-consortium annually. The e-resources can be accessed on-campus.
ii. **DELNET:** RRIT subscribed to DELNET till the year 2019.
iii. **National Digital Library of India (NDLI):** An initiative of Ministry of Education, GoI AND IIT, Kharagpur, National Digital Library of India provides quality resources. The students and the faculty members of the college were enrolled as the members of NDLI. The students and the faculty can access by using the username and password given NDLI.
iv. **Institutional Repository:** An Institutional Repository was created using D-Space. The research papers of the institution were stored in which can be accessed throughout the campus.
v. **K-Nimbus digital library:** Access through remote access, on campus.

Details of e-journals

Sl. No.	Year	Publisher	No. of e-books	No. of e-journals
1.	2017-18	IEEE IEL		305
		Elsevier Science Direct		999
		Springer e-journals		815
		ASCE e-journals		38
		Taylor & Francis		466
		ProQuest e-journals		4,244
		Knimbus Digital Library	7,913	
2.	2018-19	IEE IEL		1,800
		ASME e-journals		35
		Taylor & Francis		535
		ProQuest Engineering + Managament journals		3,900
		Digibooks Kopykitab e-books	16,000	
		Knimbus Digital Library	5,700	10,000
		Net Analytika Sententia		
3.	2019-20	Elsevier Science Direct	436	306
		Springer e-journals		690
		Institution of Civil Engineers		31
		Taylor & Francis		466
		Emerald		120
		Knimbus Digital Library	5,700	10,000
		McGraw Hill Education	505	
		New Age International	220	
		Net Analytika Sententia		
		Packet	5,000	

LIBRARY STATISTICS:

1.	CDs	1,149
2.	PROJECT/SEMINAR REPORTS	255
3.	NEWSPAPERS	08
4.	MAGAZINES	07
5.	NATIONAL JOURNALS	36
6.	READING ROOM CAPACITY	160
7.	COMPUTERS	17
8.	BOUND VOLUMES OF JOURNALS	109
9.	SEATING CAPACITY	160
10.	TOTAL FLOOR AREA	540m^2

B. Accessibility to students

Special Services/ Facilities offered:

· Online Public Access Catalogue (OPAC)/WEBOPAC

· Book Bank facilities for SC/ST Students

· Access to e-Journals/Books

· Old VTU question papers

· Membership with NDL

· Documents are fully bar-coded for fast and accurate transactions.

· Back volumes of journals (bound volumes)

· Newspaper clippings services.

· Inter Library Loan Facility.

· Display of new arrivals-books and periodicals

· Faculty publications & Research paper available in reference.

10.4.2 Internet (10)   Institute Marks : 8.00

Name of the Internet provider	City online
Available band width	100 MBPS
WiFi availability	Yes
Internet access in labs, classrooms, library and offices of all Departments	Yes
Security arrangements	Yes

Annexure I
(A) PROGRAM OUTCOME (POs)

Engineering Graduates will be able to:

1. **Engineering Knowledge :** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
2. **Problem Analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
3. **Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
4. **Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
5. **Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
6. **The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
7. **Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
8. **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
10. **Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
11. **Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
12. **Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

(B) PROGRAM SPECIFIC OUTCOME (PSOs)

PSO1	Apply the software practices, principals to design and analyse the complex computer based system.
PSO2	Design, implement and validate system software and application software to the various societal needs.

Declaration

The head of the institution needs to make a declaration as per the format given -

- I undertake that, the institution is well aware about the provisions in the NBA's accreditation manual concerned for this application, rules, regulations, notifications and NBA expert visit guidelines inforce as on date and the institutes hall fully abide by them.
- It is submitted that information provided in this Self Assessment Report is factually correct.
- I understand and agree that an appropriate disciplinary action against the Institute willbe initiated by the NBA. In case, any false statement/information is observed during pre-visit, visit, postvisit and subsequent to grant of accreditation.

Head of the Institute
Name : Dr. MAHENDRA K V
Designation : PRINCIPAL
Signature :

Seal of The Institution :

PRINCIPAL
R. R. INSTITUTE OF TECHNOLOGY
Chikkabanavara, Bangalore-560090

Place : BANGALORE
Date : 29-11-2021 22:34:48