

# SAMRAT ASHOK TECHNOLOGICAL INSTITUTE

## SELF ASSESSMENT REPORT(TIER - I) FOR Computer Science & Engg.

### Part A : Institutional Information

#### 1 Name and Address of the Institution

SAMRAT ASHOK TECHNOLOGICAL INSTITUTE,  
NIL

#### 2 Name and Address of Affiliating University

RGPV BHOPAL

#### 3 Year of establishment of the Institution:

1960/1962

#### 4 Type of the Institution:

<input type="radio"/> Institute of National Infortance	<input checked="" type="radio"/> Autonomous
<input type="radio"/> University	<input type="radio"/> Any other(please specify)
<input type="radio"/> Deemed University	

#### 5 Ownership Status:

<input type="radio"/> Central Government	<input type="checkbox"/> Trust
<input type="radio"/> State Government	<input checked="" type="checkbox"/> Society
<input type="radio"/> Government Aided	<input type="checkbox"/> Section 25 Company
<input type="radio"/> Self financing	<input type="checkbox"/> 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
Samrat Ashok Technologicz	1957	Diploma Engineering	Vidisha M.P.

**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
BE	UG	1987	1987	30	Yes	120	Not accredited (specify visit dates, year)	08/04/2016	10/04/2016	Yes	4

**Sanctioned Intake for Last Five Years for the BE**

Academic Year	Sanctioned Intake
2019-20	120
2018-19	120
2017-18	120
2016-17	60
2015-16	60
2014-15	60

M.Tech	PG	2001	2001	25	Yes	18	Not eligible for accreditation	--	--	No	2
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**Sanctioned Intake for Last Five Years for the M.Tech**

Academic Year	Sanctioned Intake
2019-20	18
2018-19	18
2017-18	25
2016-17	25
2015-16	25
2014-15	25

**8 Programs to be considered for Accreditation vide this application:**

S No	Level	Discipline	Program
1	Under Graduate	Engineering & Technology	Computer Science & Engg.

**9 Total number of employees****A. Regular\* Employees (Faculty and Staff):**

Items	2019-20		2018-19		2017-18	
	MIN	MAX	MIN	MAX	MIN	MAX
Faculty in Engineering (Male)	43	44	42	45	42	42
Faculty in Engineering (Female)	6	6	6	7	6	6
Faculty in Maths, Science & Humanities teaching in engineering program (Male)	9	9	9	9	9	9
Faculty in Maths, Science & Humanities teaching in engineering program (Female)	4	4	4	4	4	4
Non-teaching staff (Male)	130	131	131	138	57	57
Non-teaching staff (Female)	15	16	16	16	10	10

**B. Contractual\* Employees (Faculty and Staff):**

Items	2019-20		2018-19		2017-18	
	MIN	MAX	MIN	MAX	MIN	MAX
Faculty in Engineering (Male)	41	41	41	53	31	45
Faculty in Engineering (Female)	17	18	17	21	17	20
Faculty in Maths, Science & Humanities teaching in engineering Programs (Male)	5	6	6	6	2	4
Faculty in Maths, Science & Humanities teaching in engineering Programs (Female)	1	1	1	1	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:**

<b>Engineering and Technology- UG</b>	<input checked="" type="checkbox"/> Shift1	<input type="checkbox"/> Shift2
<b>Engineering and Technology- PG</b>	<input checked="" type="checkbox"/> Shift1	<input type="checkbox"/> Shift2
<b>Engineering and Technology- Polytechnic</b>	<input type="checkbox"/> Shift1	<input type="checkbox"/> Shift2
<b>MBA</b>	<input type="checkbox"/> Shift1	<input type="checkbox"/> Shift2
<b>MCA</b>	<input type="checkbox"/> Shift1	<input type="checkbox"/> Shift2

**Engineering and Technology- UG Shift-1**

Course Name	2019-20	2018-19	2017-18
Total no. of Boys	1520	1508	1583
Total no. of Girls	466	536	545
<b>Total</b>	<b>1986</b>	<b>2044</b>	<b>2128</b>

**Engineering and Technology- PG Shift-1**

Course Name	2019-20	2018-19	2017-18
Total no. of Boys	79	104	104
Total no. of Girls	16	35	50
<b>Total</b>	<b>95</b>	<b>139</b>	<b>154</b>

**11 Vision of the Institution:**

To contribute towards service and development of the mankind through quality education and research, in the area of science and technology and Management.

**12 Mission of the Institution:**

To create quality manpower equipped with technical skills ,social values, leadership, creativity and renovation for the benefit and betterment of mankind and sustainable development of the nation.

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

<b>Head of the Institution</b>	
Name	Dr. J.S. Chauhan
Designation	Director
Mobile No.	9826244840
Email ID	director@satiengg.org

**NBA Coordinator, If Designated**

Name	Dr. Sanjay Katarey
Designation	Professor
Mobile No.	9826050049
Email ID	nba@satiengg.org

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## PART B: Criteria Summary

Criteria No.	Criteria	Total Marks	Institute Marks
1	VISION, MISSION AND PROGRAM EDUCATIONAL OBJECTIVES	50	50.00
2	PROGRAM CURRICULUM AND TEACHING - LEARNING PROCESSES	100	100.00
3	COURSE OUTCOMES AND PROGRAM OUTCOMES	175	85.00
4	STUDENTS' PERFORMANCE	100	59.09
5	FACULTY INFORMATION AND CONTRIBUTIONS	200	92.40
6	FACILITIES AND TECHNICAL SUPPORT	80	80.00
7	CONTINUOUS IMPROVEMENT	75	72.00
8	FIRST YEAR ACADEMICS	50	10.00
9	STUDENT SUPPORT SYSTEMS	50	50.00
10	GOVERNANCE, INSTITUTIONAL SUPPORT AND FINANCIAL RESOURCES	120	115.00
	<b>Total</b>	<b>1000</b>	<b>713</b>

### Part B : Criteria Summary

1 VISION, MISSION AND PROGRAM EDUCATIONAL OBJECTIVES (50)

Total Marks 50.00

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	To contribute towards service and development of the mankind through quality education and research, in the area of science and technology and Management.								
Mission of the institute	To create quality manpower equipped with technical skills ,social values, leadership, creativity and renovation for the benefit and betterment of mankind and sustainable development of the nation.								
Vision of the Department	The vision of the Computer Engineering Department is to recognize itself as renowned in the field of in Computer Engineering Education, Research and innovation to meet local, national, and global economic and social need.								
Mission of the Department	<table border="1"> <thead> <tr> <th>Mission No.</th> <th>Mission Statements</th> </tr> </thead> <tbody> <tr> <td>M1</td> <td>To Create IT and ITeS knowhow in students for the digital development across the Nations</td> </tr> <tr> <td>M2</td> <td>through research with the concept of computer science</td> </tr> <tr> <td>M3</td> <td>and engineering for betterment of humankind and technical ecosystem</td> </tr> </tbody> </table>	Mission No.	Mission Statements	M1	To Create IT and ITeS knowhow in students for the digital development across the Nations	M2	through research with the concept of computer science	M3	and engineering for betterment of humankind and technical ecosystem
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M1	To Create IT and ITeS knowhow in students for the digital development across the Nations								
M2	through research with the concept of computer science								
M3	and engineering for betterment of humankind and technical ecosystem								

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

Total Marks 5.00

Institute Marks : 5.00

PEO No.	Program Educational Objectives Statements
PEO1	To impart to the student's knowledge of contemporary Science, Engineering and Information Technology related subjects.
PEO2	To enhance analytical skills of the students for decision making.
PEO3	To provide opportunity to the students to expand their horizon beyond Information Technology.
PEO4	To prepare the students to take-up career in different industries or to pursue higher studies in Information Technology and interdisciplinary programs.
PEO5	To create awareness amongst the students towards social, environmental and energy related issues and Professionalism with effective communication skills.

**1.3 Indicate where the Vision, Mission and PEOs are published and disseminated among stakeholders (15)**

Total Marks 15.00

- Institute Website: [www.satiengg.org](http://www.satiengg.org)
- Departmental Library
- Classrooms
- Faculty Cabins
- Departmental Notice Board
- Laboratory Notice board
- All Stakeholders

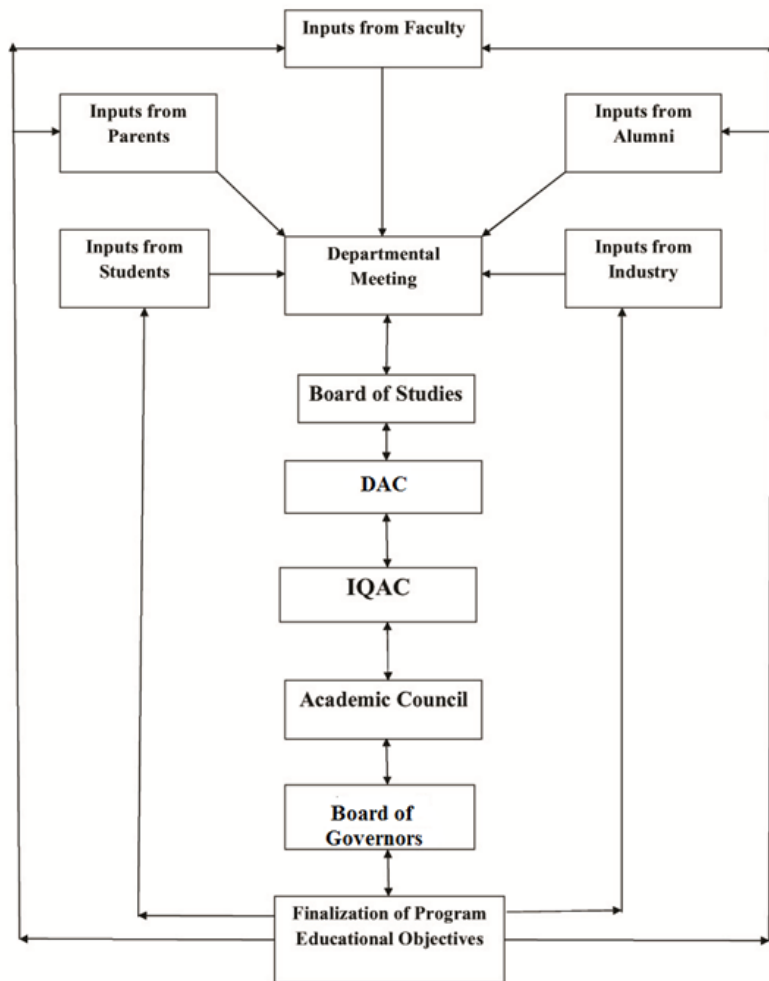
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**1.4 State the process for defining the Vision and Mission of the Department, and PEOs of the program (15)**

Total Marks 15.00

Institute Marks : 15.00





1.5 Establish consistency of PEOs with Mission of the Department (10)

Total Marks 10.00

Institute Marks : 10.00

**Program Outcomes:**

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, 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 of 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 modelling 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.
  - Programs outcomes are outcomes (1) through (12) plus any additional outcomes that may be articulated by the program.
  - The phrases that define the outcomes begin with the actions verbs:
  - Define, calculate, estimate and outline

## Program Specific Outcome

**PSO-1:** Apply the knowledge of engineering practices, science and mathematics to propose and apply effective engineering solutions.

**PSO-2:** Identify suitable hardware/software part to implement algorithms/procedures hence analyze and make inferences from the output.

PEO Statements	M1	M2	M3
To impart to the student's knowledge of contemporary Science, Engineering and Information Technology related subjects.	3 ▾	2 ▾	3 ▾
To enhance analytical skills of the students for decision making.	1 ▾	3 ▾	1 ▾
To provide opportunity to the students to expand their horizon beyond Information Technology.	3 ▾	1 ▾	3 ▾
To prepare the students to take-up career in different industries or to pursue higher studies in Information Technology and interdisciplinary programs.	1 ▾	3 ▾	1 ▾
To create awareness amongst the students towards social, environmental and energy related issues and Professionalism with effective communication skills.	2 ▾	1 ▾	3 ▾

## 2 PROGRAM CURRICULUM AND TEACHING - LEARNING PROCESSES (100)

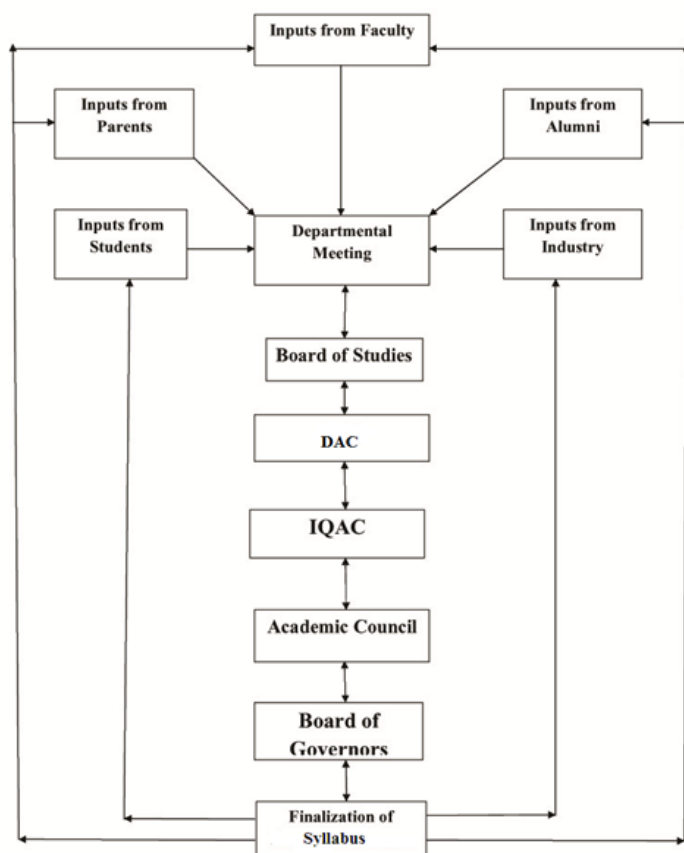
Total Marks 100.00

## 2.1 Program Curriculum (30)

Total Marks 30.00

## 2.1.1 State the process for designing the program curriculum (10)

Institute Marks : 10.00



## 2.1.3 State the components of the curriculum (5)

Institute Marks : 5.00

Course Components	Curriculum Content (% of total number of credits of the program )	Total number of contact hours	Total number of credits
Basic Sciences	11.8	21.00	19
Engineering Sciences	13.7	29.00	22
Humanities and Social Scie	7.5	11.00	12
Program Core	29.3	59.00	46
Program Electives	25	42.00	40
Open Electives	00	0.00	0
Project(s)	7.5	24.00	12
Internships/Seminars	3.75	12.00	6
Any other (Please specify)	00	0.00	0
<b>Total number of Credits</b>			<b>157</b>

**2.1.4 State the process used to identify extent of compliance of the curriculum for attaining the Program Outcomes and Program Specific Outcomes as mentioned in Annexure I (10)**

Institute Marks : 10.00

Following modes of delivery of courses help in attainment of the POs and PSOs.

- Traditional classroom teaching: The main delivery method for the courses is lecture interspersed with discussion. This helps in the obtaining a sound understanding of the course fundamentals, design and implementation issues, etc.
- Power point presentations: The abstract concepts difficult to imagine are presented through power point presentations and animation tools to impart insight into the subject. Presentations also illustrate ideas and concepts in graphics form.
- Experiments: Laboratory work demonstrates how theory can be verified by experiments through interpretation of results. Experiments are normally done in groups so students learn to work in teams.
- Assignments: Writing assignments deepens thinking and increases students engagement with course material. Good writing assignments prompt students to think more deeply about what they're learning. Some assignments carry a bigger problem nearer to reality that cannot be done in the classroom. Group assignments help them to work effectively in a team.
- Case Studies: Case studies are descriptions of a real life experience, related to the field of study or training, which are used to make points, raise issues or otherwise enhance the student's understanding and learning experience. Case studies are a great way to improve a learning experience, because they get the learner involved, and encourage immediate use of newly acquired skills. They differ from lectures or assigned readings, because they require participation and deliberate application of a broad range of skills.
- Project: Minor projects and Major projects are carried out by a group of students under the guidance of faculty wherein students apply the knowledge of all related courses in providing hardware/software solutions and present demonstrable product to their supervisors.
- Comprehensive Viva Voce: The Viva Voce is an important mode of assessment, providing an opportunity for students to demonstrate their knowledge, approach and understandings with the examiners. They are not just an assessment of the students performance but usually an opportunity for the external examiner to get feedback from the students on the performance of the department.
- Seminar: The student's collect knowledge related to a topic and present it in a technical report and oral lecture comprehensively.
- Industrial Training: Industrial Training are arranged to get the student's acquainted with industrial environment and work ethics.
- E- Learning Resources: Videos and E-learning material are used for giving exposure to domain expertise of the faculties from various reputed institutes like NPTEL, MOOCS and QEEE Courseware etc.

Delivery Methods	POs											
	PO-1	PO-2	PO-3	PO-4	PO-5	PO-6	PO-7	PO-8	PO-9	PO-10	PO-11	PO-12

Traditional classroom teaching	H	H	M	L	L	L	L	M	M	H	L	H
Power Point	M	M	M	M	M	L	M	M	L	H	L	L
Experiments	H	H	H	H	H	M	L	M	H	H	M	H
Assignments	M	M	H	M	M	L	L	L	M	H	M	M
Case Studies	M	M	H	H	M	M	L	M	H	M	M	M
Project	H	M	M	L	M	L	H	M	H	L	M	H
Comprehensive Viva Voce	H	H	M	L	L	M	M	L	H	M	L	M
Seminar	L	H	L	M	M	M	M	L	M	H	L	H
Industrial Training	H	M	L	M	L	L	L	L	H	H	M	M
E- Learning Resources	H	M	M	L	M	M	M	M	L	M	M	M
H=3	M=2	L=1										

## 2.2 Teaching-Learning Processes (70)

Total Marks 70.00

### 2.2.1 Describe Processes followed to improve quality of Teaching & Learning (15)

Institute Marks : 15.00

1. During course of the semester, the deliverable skills and pace of the course are discussed with the students in the class.
2. Based on the feedback Analysis, the course coordinator/teacher makes appropriate changes in the teaching technique.
3. If required additional classes are also engaged by the respective course coordinator for benefit of academically weak students.

### 2.2.2 Quality of end semester examination, internal semester question papers, assignments and evaluation (15)

Institute Marks : 15.00

1. Questions paper prepared according to the Course outcomes and Program Outcomes.
2. Internal Semester question papers also follow the course outcomes strictly.
3. Assignments are also given to the students according to the BLOOMS Taxonomy.
4. Evaluation Parameters are Theoretical, numerical and Objective related to innovation and creativity.

### 2.2.3 Quality of student projects (20)

Institute Marks : 20.00

- a. Develop an ability to understand / solve key concepts discussed in the classroom.
- b. Apply the knowledge of engineering practices, science and mathematics to propose and apply effective engineering solutions.
- c. Identify suitable hardware/software part to implement algorithms/procedures hence analyze and make inferences from the output.
- d. Work effectively in groups or as individual member to complete the assigned responsibilities by holding ethical standards with concern to global, environmental, economic, social issues and life- long learning.
- e. Communicate effectively about laboratory work both orally and in writing technical reports.

#### 2.2.4 Initiatives related to industry interaction (10)

Institute Marks : 10.00

- Establishment of Industry-Institute Partnership /interaction Cell.
- Organizing Workshops, conferences and symposia with joint participation of the faculty and the industries.
- Encouraging engineers from industry to visit Engineering Institution to deliver lectures.
- Participation of experts from industry in curriculum development.
- Arranging visits of staff members to various industry
- Professional consultancy by the faculty to industries.
- Industrial testing by faculty & technicians at site or in laboratory.
- Joint research programmes and field studies by faculty and people from industries.
- Visits of faculty to industry for study and discussions or delivering lectures on subjects of mutual interest.
- Visits of industry executives and practising engineers to the Institute for seeing research work and laboratories, discussions and delivering lectures on industrial practices, trends and experiences.
- Memoranda of Understanding between the Institute and industries to bring the two sides emotionally and strategically closer.
- Human resource development programmes by the faculty for practising engineers.
- Collaborative degree programmes.
- B.Tech. and M.Tech. projects/dissertation work in industries under joint guidance of the faculty and experts from industry.
- Practising engineers taking up part-time M.Tech./Ph.D. programme at NIT Tiruchirappalli
- Short-term assignment to faculty members in industries.
- Visiting faculty/professors from industries.
- Professorial Chairs sponsored by industries at the Institute.
- R&D Laboratories sponsored by industries at the Institute.
- Scholarships/fellowships instituted by industries at the Institute for students.
- Practical training of students in industries.

#### 2.2.5 Initiatives related to industry internship/summer training (10)

Institute Marks : 10.00

1. To facilitates the involvement of industry in the programme, following features have been incorporated Four credits have been earmarked for the industrial training.
2. The Department of Information Technology conducted a visit to software development companies for final year students.
3. Students are motivated for taking internships. Our institute is an academic affiliate of IET. IET memberships have been provided to selected students. Internship are offered by IET in collaboration with industries.

- Apart from this activity, our institute has also started finishing school, under which various expert lectures are conducted, by industry professional, scientist and professors of renowned institute.

Also for imparting practical knowledge, there is a provision for students to attend industrial training in their III and IV year in various private and government organization such as BSNL, CRISP, HCL, Oracle, Infosys, Login Technologies, Vedisoft, ITDP, NIIT, Prasara, Bharti Doordarshan, Dbase, AAI Pvt Limited, AIR (BGT), Ishanvi Info-Tech,

## 3 COURSE OUTCOMES AND PROGRAM OUTCOMES (175)

Total Marks 85.00

## Define the Program specific outcomes

<b>PSO1</b>	Apply the knowledge of engineering practices, science and mathematics to propose and apply effective engineering solutions.
<b>PSO2</b>	Identify suitable hardware/software part to implement algorithms/procedures hence analyze and make inferences from the output.

## 3.1 Establish the correlation between the courses and the Program Outcomes (POs) &amp; Program Specific Outcomes (25)

Institute Marks :

<b>No. of Core Courses : 6</b>	<b>C2 : 2</b>	<b>C3 : 2</b>	<b>C4 : 2</b>
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Note : Number of Outcomes for a Course is expected to be around 6.

<b>Course Name :</b>	<b>C2 01</b>	<b>Course Year :</b>	<b>2018-2019</b>
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<b>Course Name</b>	<b>Statements</b>
C2 01.1	For a given algorithm student will able to analyse the algorithms to determine the time and computation complexity and justify the correctness.
C2 01.2	For a given Search problem (Linear Search, Binary Search and Hash Search) student will able to implement it.
C2 01.3	Student will able to write an algorithm Selection Sort, Bubble Sort, Insertion Sort, Quick Sort, Merge Sort, Heap Sort and compare their performance in term of Space and Time complexity.
C2 01.4	For a given problem of Stacks, Queues and linked list student will able to implement it and analyse the same to determine the time and computation complexity.
C2 01.5	Student will able to implement Graph search and traversal algorithms and determine the time and computation complexity.

<b>Course Name :</b>	<b>C2 02</b>	<b>Course Year :</b>	<b>2018-2019</b>
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<b>Course Name</b>	<b>Statements</b>
C2 02.1	Ability to define the fundamental knowledge of Computer Architecture and Organization along with understanding the design of a basic computer.
C2 02.2	Ability to understand the concept of various registers and register transfer languages and various operations and micro-operations inside architecture.
C2 02.3	Apply to understand the concept of an Instruction and Pipelining, Vector Processing.
C2 02.4	Ability to learn the concept of control unit and memory and I/O organizations.

<b>Course Name :</b>	<b>C3 03</b>	<b>Course Year :</b>	<b>2018-2019</b>
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Course Name	Statements
C3 03.1	For a given algorithms analyse worst-case running times of algorithms based on asymptotic analysis and justify the correctness of algorithms.
C3 03.2	Describe the divide-and-conquer paradigm and explain when an algorithmic design situation calls for it. Synthesize divide-and-conquer algorithms. Derive and solve recurrence relation.
C3 03.3	For a given engineering problem, model it using graph or Tree and write the corresponding algorithm to solve the problems.
C3 03.4	Describe the Greedy and Dynamic-programming paradigm and explain when an algorithmic design situation calls for it
C3 03.5	Describe the concept of Backtracking, Branch and Bound and Lower Bound Theory in solution of hard problems.

Course Name :	C3 04	Course Year :	2018-2019
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Course Name	Statements
C3 04.1	Learning installation and using a DBMS.
C3 04.2	Creating small databases using SQL
C3 04.3	Writing variety of queries for retrieval of data from database
C3 04.4	Learning to connect database with application

Course Name :	C4 05	Course Year :	2018-2019
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Course Name	Statements
C4 05.1	Analyze and prove the equivalence of languages and design finite state machines and convert regular expressions to FSA.
C4 05.2	Design context free grammars, Construct pushdown automata and Determine equivalence of languages accepted by Push down Automata.
C4 05.3	Demonstrate the construction of a Turing Machine.
C4 05.4	Distinguish between computability and non-computability and Decidability and undecidability.

Course Name :	C4 06	Course Year :	2018-2019
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Course Name	Statements
C4 06.1	Develop a fundamental understanding of network design principles and structure of computer network.
C4 06.2	Explain the importance of data communications, how communication works in data networks and the internet, recognize the different internetworking devices and their functions.
C4 06.3	Explain the role of protocols in networking, Analyze the role and services and features of the various layers of data networks; analyze the features and operations of various application layer protocols such as Http, DNS, Telnet, FTP and SMTP.
C4 06.4	Understand working of Transport Layer and Application Layer protocol



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**Course Articulation Matrix**
**1 . course name : C201**

Course	Statements	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C201.1	For a given	2 ▼	3 ▼	3 ▼	2 ▼	- ▼	1 ▼	1 ▼	- ▼	2 ▼	- ▼	1 ▼	1 ▼
C201.2	For a given	3 ▼	3 ▼	2 ▼	1 ▼	- ▼	- ▼	- ▼	- ▼	- ▼	1 ▼	1 ▼	1 ▼
C201.3	Student will	1 ▼	1 ▼	2 ▼	1 ▼	- ▼	- ▼	1 ▼	- ▼	1 ▼	1 ▼	1 ▼	1 ▼
C201.4	For a given	1 ▼	1 ▼	3 ▼	1 ▼	3 ▼	1 ▼	1 ▼	1 ▼	- ▼	1 ▼	2 ▼	1 ▼
C201.5	Student will	1 ▼	3 ▼	2 ▼	2 ▼	2 ▼	2 ▼	1 ▼	1 ▼	1 ▼	1 ▼	1 ▼	1 ▼
<b>Average</b>		<b>1.6</b>	<b>2.2</b>	<b>2.4</b>	<b>1.4</b>	<b>2.5</b>	<b>1.33</b>	<b>1</b>	<b>1</b>	<b>1.33</b>	<b>1</b>	<b>1.2</b>	<b>1</b>

**2 . course name : C202**

Course	Statements	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C202.1	Ability to de	3 ▼	2 ▼	3 ▼	1 ▼	- ▼	1 ▼	1 ▼	- ▼	2 ▼	- ▼	- ▼	- ▼
C202.2	Ability to ur	3 ▼	3 ▼	1 ▼	1 ▼	- ▼	- ▼	- ▼	- ▼	- ▼	1 ▼	- ▼	- ▼
C202.3	Apply to un	2 ▼	3 ▼	3 ▼	1 ▼	- ▼	- ▼	1 ▼	- ▼	- ▼	1 ▼	- ▼	- ▼
C202.4	Ability to le:	2 ▼	3 ▼	3 ▼	1 ▼	- ▼	1 ▼	1 ▼	1 ▼	- ▼	1 ▼	- ▼	- ▼
<b>Average</b>		<b>1.11</b>	<b>1.22</b>	<b>1.11</b>	<b>0.44</b>	<b>0</b>	<b>0.4</b>	<b>0.43</b>	<b>0.33</b>	<b>0.5</b>	<b>0.43</b>	<b>0</b>	<b>0</b>

**3 . course name : C303**

Course	Statements	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C303.1	For a given	3 ▼	3 ▼	2 ▼	- ▼	- ▼	2 ▼	2 ▼	- ▼	2 ▼	1 ▼	1 ▼	- ▼
C303.2	Describe th	3 ▼	3 ▼	3 ▼	2 ▼	- ▼	1 ▼	1 ▼	2 ▼	1 ▼	- ▼	1 ▼	3 ▼
C303.3	For a given	3 ▼	3 ▼	- ▼	3 ▼	2 ▼	1 ▼	3 ▼	1 ▼	2 ▼	3 ▼	2 ▼	- ▼
C303.4	Describe th	3 ▼	3 ▼	2 ▼	2 ▼	1 ▼	- ▼	1 ▼	2 ▼	- ▼	1 ▼	2 ▼	- ▼
C303.5	Describe th	3 ▼	3 ▼	2 ▼	3 ▼	- ▼	2 ▼	2 ▼	1 ▼	3 ▼	2 ▼	3 ▼	1 ▼
<b>Average</b>		<b>1.07</b>	<b>1.07</b>	<b>0.69</b>	<b>0.77</b>	<b>0.75</b>	<b>0.67</b>	<b>0.75</b>	<b>0.86</b>	<b>1</b>	<b>0.64</b>	<b>0.9</b>	<b>0.57</b>

## 4 . course name : C304

Course	Statements	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C304.1	Learning in	1 ▼	3 ▼	3 ▼	1 ▼	1 ▼	2 ▼	2 ▼	1 ▼	1 ▼	1 ▼	1 ▼	- ▼
C304.2	Creating sn	1 ▼	1 ▼	3 ▼	2 ▼	1 ▼	1 ▼	1 ▼	2 ▼	1 ▼	1 ▼	- ▼	- ▼
C304.3	Writing vari	2 ▼	1 ▼	3 ▼	3 ▼	1 ▼	1 ▼	3 ▼	1 ▼	3 ▼	1 ▼	- ▼	1 ▼
C304.4	Learning to	2 ▼	3 ▼	1 ▼	3 ▼	1 ▼	2 ▼	1 ▼	2 ▼	2 ▼	1 ▼	1 ▼	- ▼
<b>Average</b>		<b>0.33</b>	<b>0.44</b>	<b>0.59</b>	<b>0.53</b>	<b>0.5</b>	<b>0.46</b>	<b>0.44</b>	<b>0.55</b>	<b>0.58</b>	<b>0.27</b>	<b>0.17</b>	<b>0.12</b>

## 5 . course name : C405

Course	Statements	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C405.1	Analyze an	2 ▼	- ▼	3 ▼	1 ▼	2 ▼	1 ▼	2 ▼	- ▼	1 ▼	3 ▼	1 ▼	- ▼
C405.2	Design con	1 ▼	2 ▼	2 ▼	3 ▼	3 ▼	- ▼	2 ▼	- ▼	- ▼	3 ▼	1 ▼	1 ▼
C405.3	Demonstrat	1 ▼	- ▼	2 ▼	1 ▼	3 ▼	2 ▼	- ▼	- ▼	1 ▼	2 ▼	- ▼	- ▼
C405.4	Distinguish	- ▼	2 ▼	- ▼	1 ▼	2 ▼	3 ▼	- ▼	3 ▼	2 ▼	3 ▼	- ▼	1 ▼
<b>Average</b>		<b>0.19</b>	<b>0.2</b>	<b>0.35</b>	<b>0.29</b>	<b>0.83</b>	<b>0.38</b>	<b>0.22</b>	<b>0.25</b>	<b>0.27</b>	<b>0.58</b>	<b>0.14</b>	<b>0.2</b>

## 6 . course name : C406

Course	Statements	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C406.1	Develop a f	3 ▼	1 ▼	1 ▼	1 ▼	3 ▼	1 ▼	1 ▼	1 ▼	2 ▼	2 ▼	1 ▼	1 ▼
C406.2	Explain the	3 ▼	2 ▼	3 ▼	2 ▼	2 ▼	1 ▼	2 ▼	2 ▼	1 ▼	3 ▼	1 ▼	- ▼
C406.3	Explain the	2 ▼	2 ▼	2 ▼	2 ▼	1 ▼	3 ▼	3 ▼	3 ▼	2 ▼	1 ▼	1 ▼	1 ▼
C406.4	Understanc	1 ▼	1 ▼	3 ▼	1 ▼	3 ▼	3 ▼	2 ▼	2 ▼	3 ▼	2 ▼	1 ▼	- ▼
<b>Average</b>		<b>0.36</b>	<b>0.25</b>	<b>0.38</b>	<b>0.24</b>	<b>0.56</b>	<b>0.4</b>	<b>0.36</b>	<b>0.5</b>	<b>0.42</b>	<b>0.35</b>	<b>0.22</b>	<b>0.17</b>

## 1 . Course Name : C201

Course	PSO1	PSO2
C201.1	2 ▼	1 ▼
C201.2	2 ▼	3 ▼

C201.3	1 ▼	1 ▼
C201.4	- ▼	1 ▼
C201.5	3 ▼	- ▼
<b>Average</b>	<b>2</b>	<b>1.5</b>

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**2 . Course Name : C202**

Course	PSO1	PSO2
C202.1	3 ▼	2 ▼
C202.2	2 ▼	1 ▼
C202.3	1 ▼	2 ▼
C202.4	1 ▼	1 ▼
<b>Average</b>	<b>1.75</b>	<b>1.5</b>

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**3 . Course Name : C303**

Course	PSO1	PSO2
C303.1	2 ▼	2 ▼
C303.2	1 ▼	1 ▼
C303.3	1 ▼	1 ▼
C303.4	1 ▼	1 ▼
C303.5	2 ▼	3 ▼
<b>Average</b>	<b>1.4</b>	<b>1.6</b>

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**4 . Course Name : C304**

Course	PSO1	PSO2
C304.1	2 ▼	2 ▼
C304.2	1 ▼	3 ▼
C304.3	1 ▼	1 ▼
C304.4	1 ▼	1 ▼
<b>Average</b>	<b>1.25</b>	<b>1.75</b>

**5 . Course Name : C405**

Course	PSO1	PSO2
C405.1	1 ▼	1 ▼
C405.2	3 ▼	3 ▼
C405.3	- ▼	1 ▼
C405.4	2 ▼	1 ▼
<b>Average</b>	<b>2</b>	<b>1.5</b>

**6 . Course Name : C406**

Course	PSO1	PSO2
C406.1	3 ▼	1 ▼
C406.2	2 ▼	2 ▼
C406.3	1 ▼	- ▼
C406.4	- ▼	3 ▼
<b>Average</b>	<b>2</b>	<b>2</b>

**Program Articulation Matrix**

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CS-1731	3	2	3	1	0	1	1	0	2	0	1	1
CS-1731	3	2	3	1	0	1	1	0	2	0	1	1
CS-1731	3	2	3	1	0	1	1	0	2	0	1	1
CS-1731	3	2	3	1	0	1	1	0	2	0	1	1
CS-1731	3	2	3	1	0	1	1	0	2	0	1	1
CS-1731	3	2	3	1	0	1	1	0	2	0	1	1
CS-1731	3	2	3	1	0	1	1	0	2	0	1	1
CS-1731	3	2	3	1	0	1	1	0	2	0	1	1
CS-1731	3	2	3	1	0	1	1	0	2	0	1	1

CS-1731	3	2	3	1	0	1	1	0	2	0	1	1
CS-1731	3	2	3	1	0	1	1	0	2	0	1	1
CS-1731	3	2	3	1	0	1	1	0	2	0	1	1
CS-1731	3	2	3	1	0	1	1	0	2	0	1	1
CS-1731	3	2	3	1	0	1	1	0	2	0	1	1
CS-1731	3	2	3	1	0	1	1	0	2	0	1	1
CS-1731	3	2	3	1	0	1	1	0	2	0	1	1
CS-1731	3	2	3	1	0	1	1	0	2	0	1	1
CS-1731	3	2	3	1	0	1	1	0	2	0	1	1
CS-1731	3	2	3	1	0	1	1	0	2	0	1	1
CS-1731	3	3	1	1	0	0	0	0	0	1	1	1
CS-1731	3	3	1	1	0	0	0	0	0	1	1	1
CS-1731	3	3	1	1	0	0	0	0	0	1	1	1
CS-1731	3	3	1	1	0	0	0	0	0	1	1	1
CS-1731	3	3	1	1	0	0	0	0	0	1	1	1
CS-1731	3	3	1	1	0	0	0	0	0	1	1	1
CS-1731	3	3	1	1	0	0	0	0	0	1	1	1
CS-1731	3	3	1	1	0	0	0	0	0	1	1	1
CS-1731	3	3	1	1	0	0	0	0	0	1	1	1
CS-1731	3	3	1	1	0	0	0	0	0	1	1	1
CS-1731	3	3	1	1	0	0	0	0	0	1	1	1
CS-1731	3	3	1	1	0	0	0	0	0	1	1	1
CS-1731	3	3	1	1	0	0	0	0	0	1	1	1
CS-1731	3	3	1	1	0	0	0	0	0	1	1	1
CS-1731	3	3	1	1	0	0	0	0	0	1	1	1
CS-1731	3	3	1	1	0	0	0	0	0	1	1	1
CS-1731	3	3	1	1	0	0	0	0	0	1	1	1
CS-1731	3	3	1	1	0	0	0	0	0	1	1	1
CS-1731	3	3	1	1	0	0	0	0	0	1	1	1
CS-1731	3	3	1	1	0	0	0	0	0	1	1	1
CS-1731	3	3	1	1	0	0	0	0	0	1	1	1
CS-1731	2	3	3	1	0	0	1	0	1	1	1	1

CS-1731	2	3	3	1	0	0	1	0	1	1	1	1
CS-1731	2	3	3	1	0	0	1	0	1	1	1	1
CS-1731	2	3	3	1	0	0	1	0	1	1	1	1
CS-1731	2	3	3	1	0	0	1	0	1	1	1	1
CS-1731	2	3	3	1	0	0	1	0	1	1	1	1
CS-1731	2	3	3	1	0	0	1	0	1	1	1	1
CS-1731	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CS-1731	2	3	3	1	0	0	1	0	1	1	1	1
CS-1731	2	3	3	1	0	0	1	0	1	1	1	1
CS-1731	2	3	3	1	0	0	1	0	1	1	1	1
CS-1731	2	3	3	1	0	0	1	0	1	1	1	1
CS-1731	2	3	3	1	0	0	1	0	1	1	1	1
CS-1731	2	3	3	1	0	0	1	0	1	1	1	1
CS-1731	2	3	3	1	0	0	1	0	1	1	1	1
CS-1731	2	3	3	1	0	0	1	0	1	1	1	1
CS-1731	2	3	3	1	0	0	1	0	1	1	1	1
CS-1731	2	3	3	1	3	1	1	1	2	1	1	1
CS-1731	2	3	3	1	3	1	1	1	2	1	1	1
CS-1731	2	3	3	1	3	1	1	1	2	1	1	1
CS-1731	2	3	3	1	3	1	1	1	2	1	1	1
CS-1731	2	3	3	1	3	1	1	1	2	1	1	1
CS-1731	2	3	3	1	3	1	1	1	2	1	1	1
CS-1731	2	3	3	1	3	1	1	1	2	1	1	1
CS-1731	2	3	3	1	3	1	1	1	2	1	1	1
CS-1731	2	3	3	1	3	1	1	1	2	1	1	1
CS-1731	2	3	3	1	3	1	1	1	2	1	1	1
CS-1731	2	3	3	1	3	1	1	1	2	1	1	1
CS-1731	2	3	3	1	3	1	1	1	2	1	1	1
CS-1731	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CS-1731	2	3	3	1	3	1	1	1	2	1	1	1
CS-1731	2	3	3	1	3	1	1	1	2	1	1	1



CS-1732	3	2	3	1	0	1	1	0	2	0	1	1
CS-1732	3	2	3	1	0	1	1	0	2	0	1	1
CS-1732	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CS-1731	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CS-1732	3	2	3	1	0	1	1	0	2	0	1	1
CS-1732	3	2	3	1	0	1	1	0	2	0	1	1
CS-1732	3	2	3	1	0	1	1	0	2	0	1	1
CS-1732	3	2	3	1	0	1	1	0	2	0	1	1
CS-1732	3	2	3	1	0	1	1	0	2	0	1	1
CS-1732	3	2	3	1	0	1	1	0	2	0	1	1
CS-1732	3	3	1	1	0	0	0	0	0	1	1	1
CS-1732	3	3	1	1	0	0	0	0	0	1	1	1
CS-1732	3	3	1	1	0	0	0	0	0	1	1	1
CS-1732	3	3	1	1	0	0	0	0	0	1	1	1
CS-1732	3	3	1	1	0	0	0	0	0	1	1	1
CS-1732	3	3	1	1	0	0	0	0	0	1	1	1
CS-1732	3	3	1	1	0	0	0	0	0	1	1	1
CS-1732	3	3	1	1	0	0	0	0	0	1	1	1
CS-1732	3	3	1	1	0	0	0	0	0	1	1	1
CS-1732	3	3	1	1	0	0	0	0	0	1	1	1
CS-1732	3	3	1	1	0	0	0	0	0	1	1	1
CS-1732	3	3	1	1	0	0	0	0	0	1	1	1
CS-1732	3	3	1	1	0	0	0	0	0	1	1	1
CS-1732	3	3	1	1	0	0	0	0	0	1	1	1
CS-1732	3	3	1	1	0	0	0	0	0	1	1	1
CS-1732	3	3	1	1	0	0	0	0	0	1	1	1
CS-1732	3	3	1	1	0	0	0	0	0	1	1	1
CS-1732	3	3	1	1	0	0	0	0	0	1	1	1
CS-1732	3	3	1	1	0	0	0	0	0	1	1	1
CS-1732	3	3	1	1	0	0	0	0	0	1	1	1
CS-1732	3	3	1	1	0	0	0	0	0	1	1	1
CS-1732	3	3	1	1	0	0	0	0	0	1	1	1
CS-1732	3	3	1	1	0	0	0	0	0	1	1	1
CS-1732	3	3	1	1	0	0	0	0	0	1	1	1
CS-1732	3	3	1	1	0	0	0	0	0	1	1	1
CS-1732	3	3	1	1	0	0	0	0	0	1	1	1
CS-1732	3	3	1	1	0	0	0	0	0	1	1	1
CS-1732	3	3	1	1	0	0	0	0	0	1	1	1
CS-1732	3	3	1	1	0	0	0	0	0	1	1	1
CS-1732	3	3	1	1	0	0	0	0	0	1	1	1
CS-1732	3	3	1	1	0	0	0	0	0	1	1	1
CS-1732	3	3	1	1	0	0	0	0	0	1	1	1
CS-1732	2	3	3	01	0	0	1	0	1	1	1	1



CS-1732	2	3	3	01	0	0	1	0	1	1	1	1
CS-1732	2	3	3	01	0	0	1	0	1	1	1	1
CS-1732	2	3	3	01	0	0	1	0	1	1	1	1
CS-1732	2	3	3	01	0	0	1	0	1	1	1	1
CS-1732	2	3	3	01	0	0	1	0	1	1	1	1
CS-1732	2	3	3	01	0	0	1	0	1	1	1	1
CS-1732	2	3	3	01	0	0	1	0	1	1	1	1
CS-1732	2	3	3	01	0	0	1	0	1	1	1	1
CS-1731	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CS-1731	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CS-1732	2	3	3	01	0	0	1	0	1	1	1	1
CS-1732	2	3	3	01	0	0	1	0	1	1	1	1
CS-1732	2	3	3	01	0	0	1	0	1	1	1	1
CS-1732	2	3	3	01	0	0	1	0	1	1	1	1
CS-1732	2	3	3	01	0	0	1	0	1	1	1	1
CS-1732	2	3	3	01	0	0	1	0	1	1	1	1
CS-1732	2	3	3	01	0	0	1	0	1	1	1	1
CS-1732	2	3	3	1	3	1	1	1	1	1	1	1
CS-1732	2	3	3	1	3	1	1	1	1	1	1	1
CS-1732	2	3	3	1	3	1	1	1	1	1	1	1
CS-1732	2	3	3	1	3	1	1	1	1	1	1	1
CS-1732	2	3	3	1	3	1	1	1	1	1	1	1
CS-1732	2	3	3	1	3	1	1	1	1	1	1	1
CS-1732	2	3	3	1	3	1	1	1	1	1	1	1
CS-1732	2	3	3	1	3	1	1	1	1	1	1	1
CS-1732	2	3	3	1	3	1	1	1	1	1	1	1
CS-1732	2	3	3	1	3	1	1	1	1	1	1	1
CS-1732	2	3	3	1	3	1	1	1	1	1	1	1
CS-1732	2	3	3	1	3	1	1	1	1	1	1	1
CS-1731	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CS-1731	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CS-1732	2	3	3	1	3	1	1	1	1	1	1	1
CS-1732	2	3	3	1	3	1	1	1	1	1	1	1
CS-1732	2	3	3	1	3	1	1	1	1	1	1	1
CS-1732	2	3	3	1	3	1	1	1	1	1	1	1
CS-1732	2	3	3	1	3	1	1	1	1	1	1	1
CS-1732	2	3	3	1	3	1	1	1	1	1	1	1

CS-1732	2	3	3	1	3	1	1	1	1	1	1	1
CS-1732	2	3	3	1	3	1	1	1	1	1	1	1
CS-1732	2	3	3	1	3	1	1	1	1	1	1	1
CS-1732	2	3	3	1	3	1	1	1	1	1	1	1
CS-1732	2	3	3	1	3	1	1	1	1	1	1	1
CS-1732	2	3	3	2	2	2	1	1	1	1	1	1
CS-1732	2	3	3	2	2	2	1	1	1	1	1	1
CS-1732	2	3	3	2	2	2	1	1	1	1	1	1
CS-1732	2	3	3	2	2	2	1	1	1	1	1	1
CS-1732	2	3	3	2	2	2	1	1	1	1	1	1
CS-1732	2	3	3	2	2	2	1	1	1	1	1	1
CS-1732	2	3	3	2	2	2	1	1	1	1	1	1
CS-1732	2	3	3	2	2	2	1	1	1	1	1	1
CS-1732	2	3	3	2	2	2	1	1	1	1	1	1
CS-1732	2	3	3	2	2	2	1	1	1	1	1	1
CS-1732	2	3	3	2	2	2	1	1	1	1	1	1
CS-1731	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CS-1731	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CS-1732	2	3	3	2	2	2	1	1	1	1	1	1
CS-1732	2	3	3	2	2	2	1	1	1	1	1	1
CS-1732	2	3	3	2	2	2	1	1	1	1	1	1
CS-1732	2	3	3	2	2	2	1	1	1	1	1	1
CS-1732	2	3	3	2	2	2	1	1	1	1	1	1
CS-1732	2	3	3	2	2	2	1	1	1	1	1	1
CS-1732	2	3	3	2	2	2	1	1	1	1	1	1
CS-1732	2	3	3	2	2	2	1	1	1	1	1	1
CS-1732	2	3	3	2	2	2	1	1	1	1	1	1
CS-1733	3	2	3	1	0	1	1	0	2	0	1	1
CS-1733	3	2	3	1	0	1	1	0	2	0	1	1
CS-1733	3	2	3	1	0	1	1	0	2	0	1	1
CS-1733	3	2	3	1	0	1	1	0	2	0	1	1
CS-1733	3	2	3	1	0	1	1	0	2	0	1	1
CS-1731	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CS-1731	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12

CS-1733	3	2	3	1	0	1	1	0	2	0	1	1
CS-1733	3	2	3	1	0	1	1	0	2	0	1	1
CS-1733	3	2	3	1	0	1	1	0	2	0	1	1
CS-1733	3	2	3	1	0	1	1	0	2	0	1	1
CS-1733	3	2	3	1	0	1	1	0	2	0	1	1
CS-1733	3	2	3	1	0	1	1	0	2	0	1	1
CS-1733	3	2	3	1	0	1	1	0	2	0	1	1
CS-1733	3	2	3	1	0	1	1	0	2	0	1	1
CS-1733	3	2	3	1	0	1	1	0	2	0	1	1
CS-1733	3	2	3	1	0	1	1	0	2	0	1	1
CS-1733	3	3	1	1	0	0	0	0	0	1	1	PO12
CS-1733	3	3	1	1	0	0	0	0	0	1	1	PO12
CS-1733	3	3	1	1	0	0	0	0	0	1	1	PO12
CS-1733	3	3	1	1	0	0	0	0	0	1	1	PO12
CS-1733	3	3	1	1	0	0	0	0	0	1	1	PO12
CS-1733	3	3	1	1	0	0	0	0	0	1	1	PO12
CS-1733	3	3	1	1	0	0	0	0	0	1	1	PO12
CS-1733	3	3	1	1	0	0	0	0	0	1	1	PO12
CS-1733	3	3	1	1	0	0	0	0	0	1	1	PO12
CS-1733	3	3	1	1	0	0	0	0	0	1	1	PO12
CS-1733	3	3	1	1	0	0	0	0	0	1	1	PO12
CS-1733	3	3	1	1	0	0	0	0	0	1	1	PO12
CS-1731	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CS-1731	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CS-1733	3	3	1	1	0	0	0	0	0	1	1	PO12
CS-1733	3	3	1	1	0	0	0	0	0	1	1	PO12
CS-1733	3	3	1	1	0	0	0	0	0	1	1	PO12
CS-1733	3	3	1	1	0	0	0	0	0	1	1	PO12
CS-1733	3	3	1	1	0	0	0	0	0	1	1	PO12
CS-1733	3	3	1	1	0	0	0	0	0	1	1	PO12
CS-1733	2	3	3	1	0	0	1	0	0	1	1	1

CS-1733	2	3	3	1	0	0	1	0	0	1	1	1
CS-1733	2	3	3	1	0	0	1	0	0	1	1	1
CS-1733	2	3	3	1	0	0	1	0	0	1	1	1
CS-1733	2	3	3	1	0	0	1	0	0	1	1	1
CS-1731	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CS-1731	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CS-1733	2	3	3	1	0	0	1	0	0	1	1	1
CS-1733	2	3	3	1	0	0	1	0	0	1	1	1
CS-1733	2	3	3	1	0	0	1	0	0	1	1	1
CS-1733	2	3	3	1	0	0	1	0	0	1	1	1
CS-1733	2	3	3	1	0	0	1	0	0	1	1	1
CS-1733	2	3	3	1	0	0	1	0	0	1	1	1
CS-1733	2	3	3	1	0	0	1	0	0	1	1	1
CS-1733	2	3	3	1	0	0	1	0	0	1	1	1
CS-1733	2	3	3	1	0	0	1	0	0	1	1	1
CS-1733	2	3	3	1	0	0	1	0	0	1	1	1
CS-1733	2	3	3	1	0	0	1	0	0	1	1	1
CS-1733	2	3	3	1	0	0	1	0	0	1	1	1
CS-1733	2	3	3	1	3	1	1	1	0	1	1	1
CS-1733	2	3	3	1	3	1	1	1	0	1	1	1
CS-1733	2	3	3	1	3	1	1	1	0	1	1	1
CS-1733	2	3	3	1	3	1	1	1	0	1	1	1
CS-1733	2	3	3	1	3	1	1	1	0	1	1	1
CS-1733	2	3	3	1	3	1	1	1	0	1	1	1
CS-1733	2	3	3	1	3	1	1	1	0	1	1	1
CS-1733	2	3	3	1	3	1	1	1	0	1	1	1
CS-1733	2	3	3	1	3	1	1	1	0	1	1	1
CS-1733	2	3	3	1	3	1	1	1	0	1	1	1
CS-1733	2	3	3	1	3	1	1	1	0	1	1	1
CS-1731	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CS-1731	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12

CS-1733	2	3	3	1	3	1	1	1	0	1	1	1
CS-1733	2	3	3	1	3	1	1	1	0	1	1	1
CS-1733	2	3	3	1	3	1	1	1	0	1	1	1
CS-1733	2	3	3	1	3	1	1	1	0	1	1	1
CS-1733	2	3	3	1	3	1	1	1	0	1	1	1
CS-1734	3	3	2	0	0	2	2	0	2	1	1	1
CS-1734	3	3	2	0	0	2	2	0	2	1	1	1
CS-1734	3	3	2	0	0	2	2	0	2	1	1	1
CS-1734	3	3	2	0	0	2	2	0	2	1	1	1
CS-1734	3	3	2	0	0	2	2	0	2	1	1	1
CS-1734	3	3	2	0	0	2	2	0	2	1	1	1
CS-1734	3	3	2	0	0	2	2	0	2	1	1	1
CS-1734	3	3	2	0	0	2	2	0	2	1	1	1
CS-1734	3	3	2	0	0	2	2	0	2	1	1	1
CS-1734	3	3	2	0	0	2	2	0	2	1	1	1
CS-1734	3	3	2	0	0	2	2	0	2	1	1	1
CS-1734	3	3	2	0	0	2	2	0	2	1	1	1
CS-1734	3	3	2	0	0	2	2	0	2	1	1	1
CS-1734	3	3	2	0	0	2	2	0	2	1	1	1
CS-1734	3	3	2	0	0	2	2	0	2	1	1	1
CS-1734	3	3	2	0	0	2	2	0	2	1	1	1
CS-1734	3	3	3	2	0	1	1	2	1	0	1	1
CS-1734	3	3	3	2	0	1	1	2	1	0	1	1
CS-1734	3	3	3	2	0	1	1	2	1	0	1	1
CS-1734	3	3	3	2	0	1	1	2	1	0	1	1
CS-1734	3	3	3	2	0	1	1	2	1	0	1	1
CS-1734	3	3	3	2	0	1	1	2	1	0	1	1
CS-1734	3	3	3	2	0	1	1	2	1	0	1	1
CS-1734	3	3	3	2	0	1	1	2	1	0	1	1
CS-1734	3	3	3	2	0	1	1	2	1	0	1	1
CS-1734	3	3	3	2	0	1	1	2	1	0	1	1
CS-1734	3	3	3	2	0	1	1	2	1	0	1	1

CS-1734	3	3	3	2	0	1	1	2	1	0	1	1
CS-1734	3	3	3	2	0	1	1	2	1	0	1	1
CS-1734	3	3	3	2	0	1	1	2	1	0	1	1
CS-1734	3	3	3	2	0	1	1	2	1	0	1	1
CS-1734	3	3	3	2	0	1	1	2	1	0	1	1
CS-1734	3	3	0	3	2	1	3	1	2	3	1	1
CS-1734	3	3	0	3	2	1	3	1	2	3	1	1
CS-1734	3	3	0	3	2	1	3	1	2	3	1	1
CS-1734	3	3	0	3	2	1	3	1	2	3	1	1
CS-1734	3	3	0	3	2	1	3	1	2	3	1	1
CS-1734	3	3	0	3	2	1	3	1	2	3	1	1
CS-1734	3	3	0	3	2	1	3	1	2	3	1	1
CS-1734	3	3	0	3	2	1	3	1	2	3	1	1
CS-1734	3	3	0	3	2	1	3	1	2	3	1	1
CS-1734	3	3	0	3	2	1	3	1	2	3	1	1
CS-1734	3	3	0	3	2	1	3	1	2	3	1	1
CS-1734	3	3	0	3	2	1	3	1	2	3	1	1
CS-1734	3	3	0	3	2	1	3	1	2	3	1	1
CS-1734	3	3	0	3	2	1	3	1	2	3	1	1
CS-1734	3	3	2	2	1	1	1	2	1	1	1	1
CS-1734	3	3	2	2	1	1	1	2	1	1	1	1
CS-1734	3	3	2	2	1	1	1	2	1	1	1	1
CS-1734	3	3	2	2	1	1	1	2	1	1	1	1
CS-1734	3	3	2	2	1	1	1	2	1	1	1	1
CS-1734	3	3	2	2	1	1	1	2	1	1	1	1
CS-1734	3	3	2	2	1	1	1	2	1	1	1	1
CS-1734	3	3	2	2	1	1	1	2	1	1	1	1
CS-1734	3	3	2	2	1	1	1	2	1	1	1	1
CS-1734	3	3	2	2	1	1	1	2	1	1	1	1
CS-1734	3	3	2	2	1	1	1	2	1	1	1	1
CS-1734	3	3	2	2	1	1	1	2	1	1	1	1
CS-1734	3	3	2	2	1	1	1	2	1	1	1	1

CS-1734	3	3	2	2	1	1	1	2	1	1	1	1
CS-1734	3	3	2	2	1	1	1	2	1	1	1	1
CS-1734	3	3	2	2	1	1	1	2	1	1	1	1
CS-1734	3	3	2	2	1	1	1	2	1	1	1	1
CS-1734	3	3	2	2	1	1	1	2	1	1	1	1
CS-1734	3	3	2	3	0	2	2	2	2	1	3	PO12
CS-1734	3	3	2	3	0	2	2	2	2	1	3	PO12
CS-1734	3	3	2	3	0	2	2	2	2	1	3	PO12
CS-1734	3	3	2	3	0	2	2	2	2	1	3	PO12
CS-1734	3	3	2	3	0	2	2	2	2	1	3	PO12
CS-1734	3	3	2	3	0	2	2	2	2	1	3	PO12
CS-1734	3	3	2	3	0	2	2	2	2	1	3	PO12
CS-1734	3	3	2	3	0	2	2	2	2	1	3	PO12
CS-1734	3	3	2	3	0	2	2	2	2	1	3	PO12
CS-1734	3	3	2	3	0	2	2	2	2	1	3	PO12
CS-1734	3	3	2	3	0	2	2	2	2	1	3	PO12
CS-1734	3	3	2	3	0	2	2	2	2	1	3	PO12
CS-1734	3	3	2	3	0	2	2	2	2	1	3	PO12
CS-1734	3	3	2	3	0	2	2	2	2	1	3	PO12
CS-1734	3	3	2	3	0	2	2	2	2	1	3	PO12
CS-1734	3	3	2	3	0	2	2	2	2	1	3	PO12
CS-1742	3	2	3	0	0	2	2	0	2	1	0	1
CS-1742	3	2	3	0	0	2	2	0	2	1	0	1
CS-1742	3	2	3	0	0	2	2	0	2	1	0	1
CS-1742	3	2	3	0	0	2	2	0	2	1	0	1
CS-1742	3	2	3	0	0	2	2	0	2	1	0	1
CS-1742	3	2	3	0	0	2	2	0	2	1	0	1
CS-1742	3	2	3	0	0	2	2	0	2	1	0	1
CS-1742	3	2	3	0	0	2	2	0	2	1	0	1
CS-1742	3	2	3	0	0	2	2	0	2	1	0	1
CS-1742	3	2	3	0	0	2	2	0	2	1	0	1
CS-1742	3	2	3	0	0	2	2	0	2	1	0	1
CS-1742	3	2	3	0	0	2	2	0	2	1	0	1
CS-1742	3	2	3	0	0	2	2	0	2	1	0	1
CS-1742	3	2	3	0	0	2	2	0	2	1	0	1

CS-1742	3	2	3	0	0	2	2	0	2	1	0	1
CS-1742	3	2	3	0	0	2	2	0	2	1	0	1
CS-1742	3	2	3	0	0	2	2	0	2	1	0	1
CS-1742	3	2	3	0	0	2	2	0	2	1	0	1
CS-1742	3	3	3	2	0	1	1	3	1	2	1	1
CS-1742	3	3	3	2	0	1	1	3	1	2	1	1
CS-1742	3	3	3	2	0	1	1	3	1	2	1	1
CS-1742	3	3	3	2	0	1	1	3	1	2	1	1
CS-1742	3	3	3	2	0	1	1	3	1	2	1	1
CS-1742	3	3	3	2	0	1	1	3	1	2	1	1
CS-1742	3	3	3	2	0	1	1	3	1	2	1	1
CS-1742	3	3	3	2	0	1	1	3	1	2	1	1
CS-1742	3	3	3	2	0	1	1	3	1	2	1	1
CS-1742	3	3	3	2	0	1	1	3	1	2	1	1
CS-1742	3	3	3	2	0	1	1	3	1	2	1	1
CS-1742	3	3	3	2	0	1	1	3	1	2	1	1
CS-1742	3	3	3	2	0	1	1	3	1	2	1	1
CS-1742	3	3	3	2	0	1	1	3	1	2	1	1
CS-1742	3	3	3	2	0	1	1	3	1	2	1	1
CS-1742	3	3	3	2	0	1	1	3	1	2	1	1
CS-1742	3	3	3	2	0	1	1	3	1	2	1	1
CS-1742	3	3	3	2	0	1	1	3	1	2	1	1
CS-1742	3	3	3	2	0	1	1	3	1	2	1	1
CS-1742	3	3	0	3	2	1	3	1	2	3	1	1
CS-1742	3	3	0	3	2	1	3	1	2	3	1	1
CS-1742	3	3	0	3	2	1	3	1	2	3	1	1
CS-1742	3	3	0	3	2	1	3	1	2	3	1	1
CS-1742	3	3	0	3	2	1	3	1	2	3	1	1
CS-1742	3	3	0	3	2	1	3	1	2	3	1	1
CS-1742	3	3	0	3	2	1	3	1	2	3	1	1
CS-1742	3	3	0	3	2	1	3	1	2	3	1	1
CS-1742	3	3	0	3	2	1	3	1	2	3	1	1
CS-1742	3	3	0	3	2	1	3	1	2	3	1	1
CS-1742	3	3	0	3	2	1	3	1	2	3	1	1
CS-1742	3	3	0	3	2	1	3	1	2	3	1	1



CS-1742	3	3	0	3	2	1	3	1	2	3	1	1
CS-1742	3	3	0	3	2	1	3	1	2	3	1	1
CS-1742	3	3	2	1	0	1	2	0	1	1	1	1
CS-1742	3	3	2	1	0	1	2	0	1	1	1	1
CS-1742	3	3	2	1	0	1	2	0	1	1	1	1
CS-1742	3	3	2	1	0	1	2	0	1	1	1	1
CS-1742	3	3	2	1	0	1	2	0	1	1	1	1
CS-1742	3	3	2	1	0	1	2	0	1	1	1	1
CS-1742	3	3	2	1	0	1	2	0	1	1	1	1
CS-1742	3	3	2	1	0	1	2	0	1	1	1	1
CS-1742	3	3	2	1	0	1	2	0	1	1	1	1
CS-1742	3	3	2	1	0	1	2	0	1	1	1	1
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CS-1742	3	3	2	1	0	1	2	0	1	1	1	1
CS-1742	3	3	2	1	0	1	2	0	1	1	1	1
CS-1742	3	3	2	3	0	2	2	1	3	2	1	1
CS-1742	3	3	2	3	0	2	2	1	3	2	1	1
CS-1742	3	3	2	3	0	2	2	1	3	2	1	1
CS-1742	3	3	2	3	0	2	2	1	3	2	1	1
CS-1742	3	3	2	3	0	2	2	1	3	2	1	1
CS-1742	3	3	2	3	0	2	2	1	3	2	1	1
CS-1742	3	3	2	3	0	2	2	1	3	2	1	1
CS-1742	3	3	2	3	0	2	2	1	3	2	1	1
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CS-1742	3	3	2	3	0	2	2	1	3	2	1	1
CS-1742	3	3	2	3	0	2	2	1	3	2	1	1
CS-1742	3	3	2	3	0	2	2	1	3	2	1	1
CS-1742	3	3	2	3	0	2	2	1	3	2	1	1
CS-1742	3	3	2	3	0	2	2	1	3	2	1	1
CS-1742	3	3	2	3	0	2	2	1	3	2	1	1
CS-1742	3	3	2	3	0	2	2	1	3	2	1	1
CS-1742	3	3	2	3	0	2	2	1	3	2	1	1
CS-1742	3	3	2	3	0	2	2	1	3	2	1	1

CS-1743	2	0	3	1	2	1	2	0	1	3	1	PO12
CS-1743	2	0	3	1	2	1	2	0	1	3	1	PO12
CS-1743	2	0	3	1	2	1	2	0	1	3	1	PO12
CS-1743	2	0	3	1	2	1	2	0	1	3	1	PO12
CS-1743	2	0	3	1	2	1	2	0	1	3	1	PO12
CS-1743	2	0	3	1	2	1	2	0	1	3	1	PO12
CS-1743	2	0	3	1	2	1	2	0	1	3	1	PO12
CS-1743	2	0	3	1	2	1	2	0	1	3	1	PO12
CS-1743	2	0	3	1	2	1	2	0	1	3	1	PO12
CS-1743	2	0	3	1	2	1	2	0	1	3	1	PO12
CS-1743	2	0	3	1	2	1	2	0	1	3	1	PO12
CS-1743	2	0	3	1	2	1	2	0	1	3	1	PO12
CS-1743	2	0	3	1	2	1	2	0	1	3	1	PO12
CS-1743	2	0	3	1	2	1	2	0	1	3	1	PO12
CS-1743	1	2	2	3	3	0	2	0	0	3	1	1
CS-1743	1	2	2	3	3	0	2	0	0	3	1	1
CS-1743	1	2	2	3	3	0	2	0	0	3	1	1
CS-1743	1	2	2	3	3	0	2	0	0	3	1	1
CS-1743	1	2	2	3	3	0	2	0	0	3	1	1
CS-1743	1	2	2	3	3	0	2	0	0	3	1	1
CS-1743	1	2	2	3	3	0	2	0	0	3	1	1
CS-1743	1	2	2	3	3	0	2	0	0	3	1	1
CS-1743	1	2	2	3	3	0	2	0	0	3	1	1
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CS-1743	1	2	2	3	3	0	2	0	0	3	1	1
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CS-1743	1	2	2	3	3	0	2	0	0	3	1	1
CS-1743	1	2	2	3	3	0	2	0	0	3	1	1
CS-1743	1	2	2	3	3	0	2	0	0	3	1	1
CS-1743	1	2	2	3	3	0	2	0	0	3	1	1
CS-1743	1	0	2	1	3	2	0	0	1	2	0	0
CS-1743	1	0	2	1	3	2	0	0	1	2	0	0

CS-1743	1	0	2	1	3	2	0	0	1	2	0	0
CS-1743	1	0	2	1	3	2	0	0	1	2	0	0
CS-1743	1	0	2	1	3	2	0	0	1	2	0	0
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CS-1751	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
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CS-1751	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
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CS-1751	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
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CS-1752	1	2	3	2	1	0	1	0	0	1	0	2
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CS-1751	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
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CS-1751	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
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CS-1752	2	2	2	2	2	0	1	0	0	0	0	1
CS-1752	2	2	2	2	2	0	1	0	0	0	0	1
CS-1752	2	2	2	2	2	0	1	0	0	0	0	1
CS-1752	2	2	2	2	2	0	1	0	0	0	0	1
CS-1752	2	2	2	2	2	0	1	0	0	0	0	1
CS-1752	2	2	2	2	2	0	1	0	0	0	0	1
CS-1752	2	2	2	2	2	0	1	0	0	0	0	1
CS-1752	2	2	2	2	2	0	1	0	0	0	0	1
CS-1753	1	1	1	2	0	0	1	1	1	0	0	0
CS-1753	1	1	1	2	0	0	1	1	1	0	0	0
CS-1753	1	1	1	2	0	0	1	1	1	0	0	0
CS-1753	1	1	1	2	0	0	1	1	1	0	0	0
CS-1753	1	1	1	2	0	0	1	1	1	0	0	0
CS-1753	1	1	1	2	0	0	1	1	1	0	0	0
CS-1753	1	1	1	2	0	0	1	1	1	0	0	0
CS-1753	1	1	1	2	0	0	1	1	1	0	0	0
CS-1753	1	1	1	2	0	0	1	1	1	0	0	0
CS-1753	1	1	1	2	0	0	1	1	1	0	0	0
CS-1753	1	1	1	2	0	0	1	1	1	0	0	0
CS-1753	1	1	1	2	0	0	1	1	1	0	0	0

CS-1751	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CS-1753	1	1	1	2	0	0	1	1	1	0	0	0
CS-1753	3	3	2	2	0	0	0	1	1	0	0	0
CS-1751	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CS-1753	3	3	2	2	0	0	0	1	1	0	0	0
CS-1753	3	3	2	2	0	0	0	1	1	0	0	0
CS-1753	3	3	2	2	0	0	0	1	1	0	0	0
CS-1753	3	3	2	2	0	0	0	1	1	0	0	0
CS-1753	3	3	2	2	0	0	0	1	1	0	0	0
CS-1753	3	3	2	2	0	0	0	1	1	0	0	0
CS-1753	3	3	2	2	0	0	0	1	1	0	0	0
CS-1753	3	3	2	2	0	0	0	1	1	0	0	0
CS-1753	3	3	2	2	0	0	0	1	1	0	0	0
CS-1753	3	3	2	2	0	0	0	1	1	0	0	0
CS-1753	3	3	2	2	0	0	0	1	1	0	0	0
CS-1753	3	3	2	2	0	0	0	1	1	0	0	0
CS-1753	3	3	2	2	0	0	0	1	1	0	0	0
CS-1753	3	3	2	2	0	0	0	1	1	0	0	0
CS-1753	3	3	2	2	0	0	0	1	1	0	0	0
CS-1753	3	3	2	2	0	0	0	1	1	0	0	0
CS-1753	3	3	2	2	0	0	0	1	1	0	0	0
CS-1753	3	3	2	2	0	0	0	1	1	0	0	0
CS-1753	3	3	2	2	0	0	0	1	1	0	0	0
CS-1753	3	3	2	2	0	0	0	1	1	0	0	0
CS-1753	3	3	2	2	0	0	0	1	1	0	0	0
CS-1753	3	3	2	2	0	0	0	1	1	0	0	0
CS-1753	3	3	2	2	0	0	0	1	1	0	0	0
CS-1753	3	3	2	2	0	0	0	1	1	0	0	0
CS-1753	3	3	2	2	0	0	0	1	1	0	0	0
CS-1753	3	3	2	2	0	0	0	1	1	0	0	0
CS-1751	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CS-1753	3	3	2	2	0	0	0	1	1	0	0	0
CS-1753	3	3	2	2	0	0	0	1	1	0	0	0
CS-1751	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12

CS-1753	3	3	2	2	0	0	0	1	1	0	0	0
CS-1753	3	3	2	2	0	0	0	1	1	0	0	0
CS-1753	3	3	2	2	0	0	0	1	1	0	0	0
CS-1753	3	3	2	2	0	0	0	1	1	0	0	0
CS-1753	3	3	2	2	0	0	0	1	1	0	0	0
CS-1753	3	3	2	2	0	0	0	1	1	0	0	0
CS-1753	3	3	2	2	0	0	0	1	1	0	0	0
CS-1753	3	3	2	2	0	0	0	1	1	0	0	0
CS-1753	3	3	2	2	0	0	0	1	1	0	0	0
CS-1753	3	3	2	2	0	0	0	1	1	0	0	0
CS-1753	3	3	2	2	0	0	0	1	1	0	0	0
CS-1753	3	3	2	2	0	0	0	1	1	0	0	0
CS-1753	3	3	2	2	0	0	0	1	1	0	0	0
CS-1753	3	3	2	2	0	0	0	1	1	0	0	0
CS-1753	3	3	2	2	0	0	0	1	1	0	0	0
CS-1753	3	3	2	2	0	0	0	1	1	0	0	0
CS-1753	3	3	2	2	0	0	0	1	1	0	0	0
CS-1753	3	3	2	2	0	0	0	1	1	0	0	0
CS-1753	3	3	2	2	0	0	0	1	1	0	0	0
CS-1753	3	3	2	2	0	0	0	1	1	0	0	0
CS-1753	3	3	2	2	0	0	0	1	1	0	0	0
CS-1753	3	3	2	2	0	0	0	1	1	0	0	0
CS-1753	3	3	2	2	0	0	0	1	1	0	0	0
CS-1751	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CS-1753	3	3	2	2	0	0	0	1	1	0	0	0
CS-1754	3	1	1	1	3	1	1	1	2	2	0	0
CS-1751	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CS-1754	3	1	1	1	3	1	1	1	2	2	0	0
CS-1754	3	1	1	1	3	1	1	1	2	2	0	0
CS-1754	3	1	1	1	3	1	1	1	2	2	0	0
CS-1754	3	1	1	1	3	1	1	1	2	2	0	0

CS-1754	3	1	1	1	3	1	1	1	2	2	0	0
CS-1754	3	1	1	1	3	1	1	1	2	2	0	0
CS-1754	3	1	1	1	3	1	1	1	2	2	0	0
CS-1754	3	1	1	1	3	1	1	1	2	2	0	0
CS-1754	3	1	1	1	3	1	1	1	2	2	0	0
CS-1754	3	1	1	1	3	1	1	1	2	2	0	0
CS-1754	3	1	1	1	3	1	1	1	2	2	0	0
CS-1754	3	2	3	2	2	1	2	2	1	3	0	0
CS-1754	3	2	3	2	2	1	2	2	1	3	0	0
CS-1754	3	2	3	2	2	1	2	2	1	3	0	0
CS-1754	3	2	3	2	2	1	2	2	1	3	0	0
CS-1754	3	2	3	2	2	1	2	2	1	3	0	0
CS-1754	3	2	3	2	2	1	2	2	1	3	0	0
CS-1754	3	2	3	2	2	1	2	2	1	3	0	0
CS-1754	3	2	3	2	2	1	2	2	1	3	0	0
CS-1754	3	2	3	2	2	1	2	2	1	3	0	0
CS-1754	3	2	3	2	2	1	2	2	1	3	0	0
CS-1754	3	2	3	2	2	1	2	2	1	3	0	0
CS-1751	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CS-1754	3	2	3	2	2	1	2	2	1	3	0	0
CS-1754	2	2	2	2	1	3	3	3	3	2	1	0
CS-1751	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CS-1754	2	2	2	2	1	3	3	3	3	2	1	0
CS-1754	2	2	2	2	1	3	3	3	3	2	1	0
CS-1754	2	2	2	2	1	3	3	3	3	2	1	0
CS-1754	2	2	2	2	1	3	3	3	3	2	1	0
CS-1754	2	2	2	2	1	3	3	3	3	2	1	0
CS-1754	2	2	2	2	1	3	3	3	3	2	1	0
CS-1754	2	2	2	2	1	3	3	3	3	2	1	0
CS-1754	2	2	2	2	1	3	3	3	3	2	1	0
CS-1754	2	2	2	2	1	3	3	3	3	2	1	0
CS-1754	2	2	2	2	1	3	3	3	3	2	1	0

CS-1754	2	2	2	2	1	3	3	3	3	2	1	0
CS-1754	2	2	2	2	1	3	3	3	3	2	1	0
CS-1754	2	2	2	2	1	3	3	3	3	2	1	0
CS-1754	1	1	3	1	3	3	2	3	2	0	0	0
CS-1754	1	1	3	1	3	3	2	3	2	0	0	0
CS-1754	1	1	3	1	3	3	2	3	2	0	0	0
CS-1754	1	1	3	1	3	3	2	3	2	0	0	0
CS-1754	1	1	3	1	3	3	2	3	2	0	0	0
CS-1754	1	1	3	1	3	3	2	3	2	0	0	0
CS-1754	1	1	3	1	3	3	2	3	2	0	0	0
CS-1754	1	1	3	1	3	3	2	3	2	0	0	0
CS-1754	1	1	3	1	3	3	2	3	2	0	0	0
CS-1754	1	1	3	1	3	3	2	3	2	0	0	0
CS-1754	1	1	3	1	3	3	2	3	2	0	0	0
CS-1751	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CS-1754	1	1	3	1	3	3	2	3	2	0	0	0
CS-1755	3	1	1	2	1	1	2	1	1	2	0	0
CS-1755	3	1	1	2	1	1	2	1	1	2	0	0
CS-1755	3	1	1	2	1	1	2	1	1	2	0	0
CS-1755	3	1	1	2	1	1	2	1	1	2	0	0
CS-1755	3	1	1	2	1	1	2	1	1	2	0	0
CS-1755	3	1	1	2	1	1	2	1	1	2	0	0
CS-1755	3	1	1	2	1	1	2	1	1	2	0	0
CS-1755	3	1	1	2	1	1	2	1	1	2	0	0
CS-1755	3	1	1	2	1	1	2	1	1	2	0	0
CS-1755	3	1	1	2	1	1	2	1	1	2	0	0
CS-1755	3	1	1	2	1	1	2	1	1	2	0	0
CS-1755	3	3	1	3	3	1	1	1	1	1	0	0
CS-1755	3	3	1	3	3	1	1	1	1	1	0	0
CS-1755	3	3	1	3	3	1	1	1	1	1	0	0

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CS-1755	3	3	1	3	3	1	1	1	1	1	0	0
CS-1755	3	3	1	3	3	1	1	1	1	1	0	0
CS-1755	3	3	1	3	3	1	1	1	1	1	0	0
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CS-1755	3	3	3	3	1	1	1	3	3	1	0	0
CS-1755	3	3	3	3	1	1	1	3	3	1	0	0
CS-1755	3	3	3	3	1	1	1	3	3	1	0	0
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CS-1755	3	3	3	3	1	1	1	3	3	1	0	0
CS-1755	3	3	3	3	1	1	1	3	3	1	0	0
CS-1755	3	3	3	3	1	1	1	3	3	1	0	0
CS-1755	3	3	3	3	1	1	1	3	3	1	0	0
CS-1755	3	3	3	3	1	1	1	3	3	1	0	0
CS-1755	3	3	3	3	1	1	1	3	3	1	0	0
CS-1755	3	3	3	3	1	1	1	3	3	1	0	0
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CS-1755	3	1	3	3	3	3	1	1	3	1	0	0
CS-1755	3	1	3	3	3	3	1	1	3	1	0	0
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CS-1761	3	3	2	1	1	2	2	3	2	1	0	0
CS-1761	3	3	2	1	1	2	2	3	2	1	0	0
CS-1761	3	3	2	1	1	2	2	3	2	1	0	0
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CS-1761	3	3	0	3	2	1	3	1	2	3	0	0
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CS-1761	3	3	2	2	1	0	1	2	0	1	2	0
CS-1761	3	3	2	2	1	0	1	2	0	1	2	0
CS-1761	3	3	2	2	1	0	1	2	0	1	2	0
CS-1761	3	3	2	2	1	0	1	2	0	1	2	0
CS-1761	3	3	2	2	1	0	1	2	0	1	2	0
CS-1761	3	3	2	2	1	0	1	2	0	1	2	0
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CS-1761	3	3	2	2	1	0	1	2	0	1	2	0
CS-1762	3	3	2	1	1	2	2	3	2	1	0	0
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CS-1762	3	3	3	2	0	1	1	2	1	0	0	0
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CS-1762	3	3	3	2	0	1	1	2	1	0	0	0
CS-1762	3	3	3	2	0	1	1	2	1	0	0	0
CS-1762	3	3	3	2	0	1	1	2	1	0	0	0
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CS-1762	3	3	3	2	0	1	1	2	1	0	0	0
CS-1762	3	3	3	2	0	1	1	2	1	0	0	0
CS-1762	3	3	0	3	2	1	3	1	2	3	0	0
CS-1762	3	3	0	3	2	1	3	1	2	3	0	0

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CS-1762	3	3	0	3	2	1	3	1	2	3	0	0
CS-1762	3	3	0	3	2	1	3	1	2	3	0	0
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CS-1762	3	3	2	2	1	0	1	2	0	1	0	0
CS-1762	3	3	2	2	1	0	1	2	0	1	0	0
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CS-1763	3	3	2	1	1	2	2	3	2	1	0	0
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CS-1763	3	3	2	1	1	2	2	3	2	1	0	0
CS-1763	3	3	2	1	1	2	2	3	2	1	0	0
CS-1763	3	3	2	1	1	2	2	3	2	1	0	0
CS-1763	3	3	2	1	1	2	2	3	2	1	0	0
CS-1763	3	3	2	1	1	2	2	3	2	1	PO11	0
CS-1763	3	3	2	1	1	2	2	3	2	1	PO11	0
CS-1763	3	3	2	1	1	2	2	3	2	1	PO11	0
CS-1763	3	3	2	1	1	2	2	3	2	1	PO11	0
CS-1763	3	3	2	1	1	2	2	3	2	1	PO11	0
CS-1763	3	3	2	1	1	2	2	3	2	1	PO11	0

CS-1763	3	3	2	1	1	2	2	3	2	1	PO11	0
CS-1763	3	3	2	1	1	2	2	3	2	1	PO11	0
CS-1763	3	2	2	3	2	1	3	2	1	2	3	0
CS-1763	3	2	2	3	2	1	3	2	1	2	3	0
CS-1763	3	2	2	3	2	1	3	2	1	2	3	0
CS-1763	3	2	2	3	2	1	3	2	1	2	3	0
CS-1763	3	2	2	3	2	1	3	2	1	2	3	0
CS-1763	3	2	2	3	2	1	3	2	1	2	3	0
CS-1763	3	2	2	3	2	1	3	2	1	2	3	0
CS-1763	3	3	2	2	1	1	1	1	2	1	1	0
CS-1763	3	3	2	2	1	1	1	1	2	1	1	0
CS-1763	3	3	2	2	1	1	1	1	2	1	1	0
CS-1763	3	3	2	2	1	1	1	1	2	1	1	0
CS-1763	3	3	2	2	1	1	1	1	2	1	1	0
CS-1763	3	3	2	2	1	1	1	1	2	1	1	0
CS-1763	3	3	2	2	1	1	1	1	2	1	1	0
CS-1763	3	3	2	2	1	1	1	1	2	1	1	0
CS-1763	3	3	2	2	1	1	1	1	2	1	1	0
CS-1763	3	3	2	2	1	1	1	1	2	1	1	0
CS-1764	3	3	2	1	1	3	2	3	1	3	0	0
CS-1764	3	3	2	1	1	3	2	3	1	3	0	0
CS-1764	3	3	2	1	1	3	2	3	1	3	0	0
CS-1764	3	3	2	1	1	3	2	3	1	3	0	0
CS-1764	3	3	2	1	1	3	2	3	1	3	0	0
CS-1764	3	3	2	1	1	3	2	3	1	3	0	0
CS-1764	3	3	1	2	1	1	1	2	1	0	0	0
CS-1764	3	3	1	2	1	1	1	2	1	0	0	0
CS-1764	3	3	1	2	1	1	1	2	1	0	0	0
CS-1764	3	3	1	2	1	1	1	2	1	0	0	0
CS-1764	3	3	1	2	1	1	1	2	1	0	0	0
CS-1764	3	3	1	2	1	1	1	2	1	0	0	0

CS-1764	3	3	1	2	1	1	1	2	1	0	0	0
CS-1764	3	3	3	3	2	1	3	1	2	3	0	0
CS-1764	3	3	3	3	2	1	3	1	2	3	0	0
CS-1764	3	3	3	3	2	1	3	1	2	3	0	0
CS-1764	3	3	3	3	2	1	3	1	2	3	0	0
CS-1764	3	3	3	3	2	1	3	1	2	3	0	0
CS-1764	3	3	3	3	2	1	3	1	2	3	0	0
CS-1764	3	3	2	2	1	1	1	2	1	1	0	0
CS-1764	3	3	2	2	1	1	1	2	1	1	0	0
CS-1764	3	3	2	2	1	1	1	2	1	1	0	0
CS-1764	3	3	2	2	1	1	1	2	1	1	0	0
CS-1764	3	3	2	2	1	1	1	2	1	1	0	0
CS-1765	1	3	1	1	1	2	2	1	1	2	0	0
CS-1765	1	3	1	1	1	2	2	1	1	2	0	0
CS-1765	1	3	1	1	1	2	2	1	1	2	0	0
CS-1765	1	3	1	1	1	2	2	1	1	2	0	0
CS-1765	3	1	1	2	1	1	1	2	2	2	0	0
CS-1765	3	1	1	2	1	1	1	2	2	2	0	0
CS-1765	3	1	1	2	1	1	1	2	2	2	0	0
CS-1765	3	1	1	2	1	1	1	2	2	2	0	0
CS-1765	2	1	2	3	2	1	1	1	2	3	0	0
CS-1765	2	1	2	3	2	1	1	1	2	3	0	0
CS-1765	2	1	2	3	2	1	1	1	2	3	0	0
CS-1765	2	1	2	3	2	1	1	1	2	3	0	0
CS-1765	2	1	2	3	2	1	1	1	2	3	0	0
CS-1765	1	2	2	2	1	3	1	2	1	1	0	0
CS-1765	1	2	2	2	1	3	1	2	1	1	0	0

CS-1765	1	2	2	2	1	3	1	2	1	1	0	0
CS-1765	1	2	2	2	1	3	1	2	1	1	0	0
CS-1765	1	2	2	2	1	3	1	2	1	1	0	0
CS-1771	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CS-1771	3	3	3	1	1	2	2	1	1	2	0	0
CS-1771	3	3	3	1	1	2	2	1	1	2	0	0
CS-1771	3	3	3	1	1	2	2	1	1	2	0	0
CS-1771	3	3	3	2	1	1	1	2	2	2	0	0
CS-1771	3	3	3	2	1	1	1	2	2	2	0	0
CS-1771	3	3	3	2	1	1	1	2	2	2	0	0
CS-1771	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CS-1771	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CS-1771	3	3	3	3	2	1	1	1	2	3	0	0
CS-1771	3	3	3	3	2	1	1	1	2	3	0	0
CS-1771	3	3	3	3	2	1	1	1	2	3	0	0
CS-1772	3	1	3	1	1	3	3	3	1	1	0	0
CS-1772	3	1	3	1	1	3	3	3	1	1	0	0
CS-1772	3	1	3	1	1	3	3	3	1	1	0	0
CS-1771	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CS-1771	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CS-1772	2	1	2	3	2	1	3	3	3	1	0	0
CS-1772	2	1	2	3	2	1	3	3	3	1	0	0
CS-1772	2	1	2	3	2	1	3	3	3	1	0	0
CS-1772	1	3	3	2	1	3	2	1	2	2	0	0
CS-1772	1	3	3	2	1	3	2	1	2	2	0	0
CS-1772	1	3	3	2	1	3	2	1	2	2	0	0
CS-1771	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CS-1771	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CS-1772	3	1	1	2	1	2	2	1	0	0	0	0
CS-1772	3	1	1	2	1	2	2	1	0	0	0	0

CS-1772	3	1	1	2	1	2	2	1	0	0	0	0
CS-1773	3	3	3	1	1	1	3	3	2	1	1	1
CS-1773	3	3	3	1	1	1	3	3	2	1	1	1
CS-1773	3	3	3	1	1	1	3	3	2	1	1	1
CS-1771	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CS-1771	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CS-1773	3	2	1	2	3	2	1	2	2	3	0	0
CS-1773	3	2	1	2	3	2	1	2	2	3	0	0
CS-1773	3	2	1	2	3	2	1	2	2	3	0	0
CS-1773	2	1	2	3	2	1	2	3	3	1	0	0
CS-1773	2	1	2	3	2	1	2	3	3	1	0	0
CS-1773	2	1	2	3	2	1	2	3	3	1	0	0
CS-1771	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CS-1771	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CS-1773	1	3	3	2	1	3	2	1	2	2	0	0
CS-1773	1	3	3	2	1	3	2	1	2	2	0	0
CS-1773	1	3	3	2	1	3	2	1	2	2	0	0
CS-1774	3	0	0	0	0	0	0	0	2	1	0	0
CS-1774	3	0	0	0	0	0	0	0	2	1	0	0
CS-1774	3	0	0	0	0	0	0	0	2	1	0	0
CS-1771	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CS-1771	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CS-1774	2	0	1	02	0	1	2	0	2	0	0	0
CS-1774	2	0	1	02	0	1	2	0	2	0	0	0
CS-1774	2	0	1	02	0	1	2	0	2	0	0	0
CS-1774	3	2	2	0	2	0	1	2	0	2	2	0
CS-1774	3	2	2	0	2	0	1	2	0	2	2	0
CS-1774	3	2	2	0	2	0	1	2	0	2	2	0
CS-1771	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CS-1771	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12

CS-1774	3	0	3	2	2	2	2	3	3	1	0	0
CS-1774	3	0	3	2	2	2	2	3	3	1	0	0
CS-1774	3	0	3	2	2	2	2	3	3	1	0	0
CS-1775	2	0	2	0	1	1	02	3	1	0	0	0
CS-1775	2	0	2	0	1	1	02	3	1	0	0	0
CS-1775	2	0	2	0	1	1	02	3	1	0	0	0
CS-1775	3	1	3	1	0	3	3	3	1	1	0	0
CS-1775	3	1	3	1	0	3	3	3	1	1	0	0
CS-1775	3	1	3	1	0	3	3	3	1	1	0	0
CS-1775	3	0	1	0	0	2	1	0	2	0	2	0
CS-1775	3	0	1	0	0	2	1	0	2	0	2	0
CS-1775	3	0	1	0	0	2	1	0	2	0	2	0
CS-1775	0	0	3	2	1	3	2	0	2	2	00	0
CS-1775	0	0	3	2	1	3	2	0	2	2	00	0
CS-1775	0	0	3	2	1	3	2	0	2	2	00	0
CS-1777	2	2	2	1	0	3	0	3	1	2	3	0
CS-1777	2	2	2	1	0	3	0	3	1	2	3	0
CS-1777	2	2	2	1	0	3	0	3	1	2	3	0
CS-1777	3	1	1	2	0	1	1	0	1	2	1	2
CS-1777	3	1	1	2	0	1	1	0	1	2	1	2
CS-1777	3	1	1	2	0	1	1	0	1	2	1	2
CS-1777	3	2	3	3	2	1	0	0	2	1	2	2
CS-1777	3	2	3	3	2	1	0	0	2	1	2	2
CS-1777	3	2	3	3	2	1	0	0	2	1	2	2
CS-1781	0	3	2	1	1	2	2	3	2	2	3	1
CS-1781	0	3	2	1	1	2	2	3	2	2	3	1
CS-1781	1	1	1	2	3	3	3	2	2	2	1	0
CS-1781	1	1	1	2	3	3	3	2	2	2	1	0
CS-1781	2	2	2	1	1	1	3	2	1	1	1	2
CS-1781	2	2	2	1	1	1	3	2	1	1	1	2



CS-1782	1	0	0	0	1	1	1	1	2	1	2	2
CS-1782	1	0	0	0	1	1	1	1	2	1	2	2
CS-1782	2	2	2	0	1	1	1	0	1	0	1	1
CS-1782	2	2	2	0	1	1	1	0	1	0	1	1
CS-1782	3	1	2	1	3	1	0	0	1	2	3	2
CS-1782	3	1	2	1	3	1	0	0	1	2	3	2
CS-1783	1	1	1	2	2	3	3	1	1	1	0	2
CS-1783	1	1	1	2	2	3	3	1	1	1	0	2
CS-1783	2	2	1	0	0	0	1	1	1	1	0	0
CS-1783	2	2	1	0	0	0	1	1	1	1	0	0
CS-1783	0	0	1	2	2	3	1	2	3	3	3	1
CS-1783	0	0	1	2	2	3	1	2	3	3	3	1
CS-1784	1	2	2	2	2	1	0	0	1	1	2	2
CS-1784	1	2	2	2	2	1	0	0	1	1	2	2
CS-1784	1	1	1	2	2	2	2	2	2	0	0	1
CS-1784	1	1	1	2	2	2	2	2	2	0	0	1
CS-1784	2	0	1	0	3	0	1	2	2	1	3	3
CS-1784	2	0	1	0	3	0	1	2	2	1	3	3

Course	PSO1	PSO2
CS-1731	1	3
CS-1732	3	1
CS-1733	1	1
CS-1734	2	2
CS-1735	2	3
CS-1736	3	3
CS-1737	2	2
CS-1741	1	1
CS-1742	2	2
CS-1743	3	3

CS-1744	2	2
CS-1745	3	3
CS-1746	2	2
CS-1747	1	3
CS-1751	2	3
CS-1752	2	3
CS-1753	1	1
CS-1754	3	2
CS-1755	2	2
CS-1756	2	3
CS-1757	2	3
CS-1761	2	2
CS-1762	1	2
CS-1763	3	2
CS-1764	3	2
CS-1765	2	3
CS-1766	1	3
CS-1767	2	2
CS-1771	3	2
CS-1772	3	2
CS-1773	2	1
CS-1774	2	1
CS-1775	3	2
CS-1776	1	2
CS-1777	2	3
CS-1781	2	2
CS-1782	3	2
CS-1783	2	2
CS-1784	1	3

## 3.2 Attainment of Course Outcomes (75)

Total Marks 75.00

## 1. ASSESSMENT TOOLS

### End semester & Mid Semester Exam: (Direct Assessment)

- The Subject teacher will design assignment questions/laboratory problems/projects and distributes them to the students.
- During persuasion of the course, the subject teacher will conduct 2 Mid Semester tests as per the academic calendar in a given semester

### Practical Exam Evaluation: (Direct Assessment)

- The subject teacher will take practical examination of the subject. The students have to give Quiz test and practical Viva in the presence of External Examiner. The students obtain less than 50% marks will considered as fail in respective practical Examination

### Seminar Work Evaluation: (Direct Assessment)

- Seminar coordinators follow rubrics, which is set by the Department for evaluation of laboratory programs.
- All seminar coordinators will conduct 2 seminars per student. It will be evaluated by the seminar coordinator and marks will be submitted to the Department.

### Project Work Evaluation: (Direct Assessment)

- During project work, the evaluation process will be divided into number of the phases to assess the continuous progress.
- The project guides and project coordinator follow rubrics, which is set by the Department for evaluation and then submit to the head of Department.
- Each internal guide will see the statement of project and literature of work and implementation details. The department will encourage students to make publications in standard conference/journal forums.

### Course Exit Survey (In-Direct Assessment)

## 2. PROCESS

Process used for attainment of course outcome is as follows

- First Bench Mark is finalized by concern teacher for End Semester, Mid Semester Examination, assignment, tutorials etc.
- Percentage attainment is calculated by counting the number of students scoring benchmark and above divided by total no. of students for various assessment tools.
- Attainment levels have to be calculated

50% students scoring more than benchmark ---Level-1

60% students scoring more than benchmark ---Level-2

70% students scoring more than benchmark ---Level-3

- Direct Assessment Course Outcome Attainment is calculated by considering the weight age of 70% for End Semester and weight age of 30% for Mid Semester Examinations, assignment, tutorials etc.
- Indirect assessment tools are also used for CO Attainment Calculation based on course exit survey
- Calculating the attainment level of Overall Course Outcome (Direct Assessment + Indirect Assessment) by considering the weight age of 80% for direct assessment and weight age of 20% for indirect Assessment.

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### 3.2.2 Record the attainment of Course Outcomes of all courses with respect to set attainment levels (65)

Institute Marks : 65.00

The project work will be in-house industry project, where student need to implement project related to any domain of industry like education, legal, manufacturing, design, pharmaceutical, Ecommerce, etc.

2. Students are required to get approval of project definition from the department.
3. After approval of project definition students are required to report their project work weekly to respective internal guide.
4. Maximum 4 students can allow working in particular project group.
5. The students are required to identify their project within two weeks of the commencement of the classes and they are required to follow all the rules and instructions issued by department.
6. Each student or student group would work under the guidance of the Faculty from the College. In case any problem/other issue arises for the smooth progress of Inter Departmental project work discovery/Practical Training, it should be immediately brought to the notice of the major project in charge co-ordinator/Faculty.
7. The students are required to submit **Project synopsis Pre-report** to their Head of the Department with the remarks of guide in their College during **Eighth week** of the semester.

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### 3.3 Attainment of Program Outcomes and Program Specific Outcomes (75)

Total Marks 10.00

#### 3.3.1 Describe assessment tools and processes used for measuring the attainment of each Program Outcome and Program Specific Outcomes (10)

Institute Marks : 10.00

##### 1. Assessment Tools

- **Direct Assessment Tools**

After calculating the overall attainment of course outcome, PO attainment is calculated on the basis of mapping of CO's with PO's of individual subject

- **Indirect Assessment Tools:**

Employer survey at the end of the program

Graduate Exit Survey– Questionnaires' as follows:

AMRAT ASHOK TECHNOLOGICAL INSTITUTE

#### DEPARTMENT OF COMPUTER SCIENCE ENGINEERING

##### Exit Meeting Survey

1. Course Content Quality of the program
2. Quality of getting counseling in personal or educational issue
3. Availability of facilities & infrastructure
4. Intellectual enrichment
5. Quality of campus life

6. Financial support opportunities Educational value
7. Career Services and Placement
8. Rate your basic engineering knowledge to become a competent engineer after joining SATI
9. Rate the quality of teaching offered by the department to you to understand the recent development in engineering.
10. How efficient are you in developing effective solutions to the problems?
11. Rate your ability to approach and analyze a problem to arrive at concrete and effective results.
12. Have you learnt any new skills or techniques apart from those included in the curriculum?
13. How better are you in understanding the societal problems with your core knowledge?
14. Rate the awareness that you have about the available resources and ensure judicious use of them without affecting the environment for sustainable progress.
15. Are you satisfied with your Development of personal code of ethics?
16. Are you satisfied with your group activity during their course of study?
17. Rate your comfort while speaking in a large group and do you think that you have acquired communication skills after joining to our college?
18. Are you satisfied with the training provided by the Department to you to do interdisciplinary projects and carry them out in time and utilize fund in a meaningful way?
19. Rate the training provided by the institution to prepare you a successful self-reliant engineer?
20. Will you be able to conduct professional practice?
21. Will you be able to conduct independent research?
22. Are you able to communicate effectively?
23. Are you able to understand fundamental principles of your work field
24. Would you recommend Engineering in CSE from SATI to someone else?
25. Based on your experience, what can CSE department improve upon?

Signature-----

Name-----

Sch. No-----, -----

Year of Completing VIII Sem-----

## 2. Process

- PO Attainment Calculation (Direct Assessment) By factoring in the attainment of CO's PO attainment = (PO mapping level /3)\* CO attainment
- Indirect assessment tools are also used for PO Attainment Calculation based on Graduate exit survey & Employer Survey
- Calculating the attainment level of Overall Program Outcome (Direct Assessment + Indirect Assessment) by considering the weight age of 80% for direct assessment and weight age of 20% for indirect Assessment.

### 3.3.2 Provide results of evaluation of each PO & PSO (65)

Institute Marks :

#### PO Attainment

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CS-1731	PO1	1	1	0	2	0	3	0	3	1	0	01
CS-1733	0	1	02	0	1	2	1	1	1	2	3	2

#### PO Attainment Indirect

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
Survey1	1	2	2	1	1	2	2	2	2	2	2	2

**PO Attainment Level**

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
No record exist(s)												

**PSO Attainment**

Course	PSO1	PSO2
CS-1731	1	2
CS-1734	1	1
CS-1732	2	1
CS-1735	2	3
CS-1733	2	2
CS-1741	3	3
CS-1742	1	1
CS-1744	2	1
CS-1743	2	2
CS-1745	1	1
CS-1751	2	1
CS-1752	2	2
CS-1753	2	3
CS-1754	1	1
CS-1755	2	2
CS-1761	1	1
CS-1762	2	1
CS-1763	3	3
CS-1764	1	1
CS-1765	2	1
CS-1771	2	2
CS-1772	2	3
CS-1773	1	2

CS-1774	3	1
CS-1775	1	3
CS-1781	2	2
CS-1782	2	3
CS-1783	3	3
CS-1784	2	2

#### PSO Attainment Indirect

Survey	PSO1	PSO2
survey 1	2	1
survey 2	2	1

#### PSO Attainment Level

Course	PSO1	PSO2
No record exist(s)		

4 STUDENTS' PERFORMANCE (100)

Total Marks 59.09

Institute Marks :

Table 4.1

Item (Information to be provided cumulatively for all the shifts with explicit headings, wherever applicable)	2019-20 (CAY)	2018-19 (CAYm1)	2017-18 (CAYm2)	2016-17 (CAYm3)	2015-16 (CAYm4)	2014-15 (CAYm5)	2013-14 (CAYm6)
Sanctioned intake of the program(N)	120	120	120	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)	137	114	127	63	63	61	66
Number of students admitted in 2nd year in the same batch via lateral entry (N2)	0	12	12	12	12	12	12
Separate division students, If applicable (N3)	0	0	0	0	0	0	0
Total number of students admitted in the programme(N1 + N2 + N3)	137	126	139	75	75	73	78

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
2019-20 (CAY)	137				
2018-19 (CAYm1)	126	70			
2017-18 (CAYm2)	139	94	94		
2016-17 (CAYm3)	75	48	47	44	
2015-16 (LYG)	75	57	52	47	42
2014-15 (LYGm1)	73	43	43	39	32
2013-14 (LYGm2)	78	42	43	42	36

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
2019-20 (CAY)	137				
2018-19 (CAYm1)	126	70			
2017-18 (CAYm2)	139	110	108		
2016-17 (CAYm3)	75	52	53	53	
2015-16 (LYG)	75	60	59	51	49
2014-15 (LYGm1)	73	50	52	44	44
2013-14 (LYGm2)	78	52	53	48	42

## 4.1 Enrolment Ratio (20)

Total Marks 20.00



	N (From Table 4.1)	N1 (From Table 4.1)	Enrollment Ratio [(N1/N)*100]
2019-20 (CAY)	120	137	114.17
2018-19 (CAYm1)	120	114	95.00
2017-18 (CAYm2)	120	127	105.83

Average [ (ER1 + ER2 + ER3) / 3 ] : 105.00

Assessment : 20.00

**4.2 Success Rate in the stipulated period of the program (20)**

Total Marks 10.33

**4.2.1 Success rate without backlogs in any semester / year of study (15)**

Institute Marks : 7.35

Item	Latest Year of Graduation, LYG (2015-16)	Latest Year of Graduation minus 1, LYGm1 (2014-15)	Latest Year of Graduation minus 2 LYGm2 (2013-14)
X Number of students admitted in the corresponding First year + admitted in 2nd year via lateral entry and seperated division, if applicable	75.00	73.00	78.00
Y Number of students who have graduated without backlogs in the stipulated period	42.00	32.00	36.00
Success Index [ SI = Y / X ]	0.56	0.44	0.46

Average SI [ (SI1 + SI2 + SI3) / 3 ] : 0.49

Assessment [15 \* Average SI] : 7.35

**4.2.2 Success rate in stipulated period (5)**

Institute Marks : 2.98

Item	Latest Year of Graduation, LYG (2015-16)	Latest Year of Graduation minus 1, LYGm1 (2014-15)	Latest Year of Graduation minus 2 LYGm2 (2013-14)
X Number of students admitted in the corresponding First year + admitted in 2nd year via lateral entry and seperated division, if applicable	75.00	73.00	78.00
Y Number of students who have graduated in the stipulated period	49.00	44.00	42.00
Success Index [ SI = Y / X ]	0.65	0.60	0.54

Average SI[ ( SI1 + SI2 + SI3) / 3 ]: 0.60

Assessment [ 5 \* Average SI ] : 2.98

**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 Second Year (10)

Total Marks 8.56

Institute Marks : 8.56

Academic Performance	CAYm2 ( 2017-18 )	CAYm3 ( 2016-17 )	LYG ( 2015-16 )
Mean of CGPA or mean percentage of all successful students(X)	6.50	6.80	7.00
Total number of successful students (Y)	108.00	53.00	59.00
Total number of students appeared in the examination (Z)	122.00	64.00	72.00
API [ X * (Y/Z) ]	5.75	5.63	5.74

Average API [ (AP1 + AP2 + AP3)/3 ] : 5.71

Assessment [ 1.5 \* AverageAPI ] : 8.56

#### 4.4 Placement, Higher Studies and Entrepreneurship (30)

Total Marks 20.20

Institute Marks : 20.20

Item	LYG( 2015-16 )	LYGm1( 2014-15 )	LYGm2( 2013-14 )
Total No of Final Year Students(N)	51.00	44.00	48.00
No of students placed in the companies or government sector(X)	30.00	22.00	18.00
No of students admitted to higher studies with valid qualifying scores(GATE or equivalent State or National Level tests, GRE, GMAT etc.) (Y)	3.00	5.00	5.00
No of students turned entrepreneur in engineering/technology (Z)	3.00	5.00	5.00
Placement Index [ (X+Y+Z)/N ] :	0.71	0.73	0.58

Average Placement [ (P1 + P2 + P3)/3 ] : 0.67

Assessment [ 30 \* Average Placement ] : 20.20

**Program Name : Computer Science & Engg.****Assessment Year : 2018-19 (CAYm1)**

S.No	Student Name	Enrollment No	Employee Name	Appointment No
1	Mrityunjay pathak	108CS151024	TCS	2018-19
2	Himanil Choudhary	0108CS151014	TCS	2018-19
3	Palak Awasthi	0108CS151028	TCS	2018-19
4	RAHUL Yadav	0108CS151038	TCS	2018-19
5	Sajal Chourasiya	0108CS151043	TCS	2018-19

**Assessment Year : 2017-18 (CAYm2)**

S.No	Student Name	Enrollment No	Employee Name	Appointment No
1	Aishwarya Soni	0108CS141007	TCS	2017-18
2	Anand Patidar	0108CS141010	TCS	2017-18
3	Ashtha Jain	0108CS141014	TCS	2017-18
4	Gaurav Bhargav	0108CS141021	TCS	2017-18
5	Nitish Kumar	0108CS141030	TCS	2017-18
6	Sumit Tatiya	0108CS141053	TCS	2017-18
7	Vivek Pritmani	0108CS141059	TCS	2017-18

**Assessment Year : 2016-17 (CAYm3)**

S.No	Student Name	Enrollment No	Employee Name	Appointment No
1	Ashutosh Agrawal	0108CS131008	TCS	2016-17
2	Ayushman Tiwari	0108CS131010	TCS	2016-17
3	Prachi Jain	0108CS131039	TCS	2016-17
4	Gyanendra Singh Yadav	0108CS131018	TCS	2016-17
5	Ankita Tomar	0108CS131004	TCS	2016-17

**4.5 Professional Activities (20)**

Total Marks 0.00

**4.5.1 Professional societies/chapters and organizing engineering events (5)**

Institute Marks : 0.00

NIL

**4.4.2 Publication of technical magazines, newsletters, etc. (5)**

Institute Marks : 0.00

NIL

**4.4.3 Participation in inter-institute events by students of the program of study (10)**

Institute Marks : 0.00

NIL

**5 FACULTY INFORMATION AND CONTRIBUTIONS (200)**

Total Marks 92.40

Sr. No	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 the Institution (Yes / No)	Date of Leaving	IS HOD?
1	Dr. S. K Shrivastava	AXYPS5682F	ME/M. Tech and PhD	17/07/2014	Machine Learning	92	03	0	Professor	23/07/2014	23/09/2005	Regular	Yes		Yes
2	Dr Kanak saxena	ADAPS8425M	MCA and PhD	08/01/2001	Parallel Computing	0	0	0	Professor	23/02/2005	01/06/1990	Regular	Yes		No
3	Dr. Umesh banodha	AJPPB5668H	ME/M. Tech and PhD	05/09/2016	Software Engineering	0	0	0	Associate Professor	06/11/2017	29/09/2003	Regular	Yes		No
4	Satyam Maheshwari	AFRPM0587Q	M.E/M.Tech	10/08/2011	Data Mining	4	0	0	Assistant Professor		13/08/2003	Regular	Yes		No
5	Ajay Kumar Goyal	ALCPG8792Q	M.E/M.Tech	28/11/2012	Optimization Techniques	22	0	0	Assistant Professor		14/08/2003	Regular	Yes		No
6	Satish Pawar	ASCPP4032D	M.E/M.Tech	23/07/2013	Networking	2	0	0	Assistant Professor		26/08/2005	Regular	Yes		No
7	Sandeep Raghuvanshi	AMGPR1536G	M.E/M.Tech	05/11/2009	Data science	22	0	0	Assistant Professor		01/10/2004	Regular	Yes		No
8	Dr. Sunil Joshi	AGNPJ5070C	MCA and PhD	28/11/2013	Machine Learning and Data Mining	8	0	0	Assistant Professor		25/08/2005	Regular	Yes		No

9	Prof. Abhishek Mathur	AOVPM2294P	M.E/M.Tech	06/02/2012	Ad-Hoc Network	5	0	0	Assistant Professor		25/08/2005	Regular	Yes		No
10	Shaila Chugh	BEXPS6462Q	M.E/M.Tech	27/04/2012	Soft Computing	4	0	0	Assistant Professor		05/04/2004	Regular	Yes		No
11	Pranita Jain	AHRPJ4633L	M.E/M.Tech	05/11/2009	Social Media Mining	15	0	0	Assistant Professor		23/09/2005	Regular	Yes		No
12	Satendra Jain	AHFPJ0434K	M.E/M.Tech	04/09/2017	Data mining	5	0	0	Assistant Professor		24/08/2006	Regular	Yes		No
13	Anil Suryawanshi	CBZPS5138P	M.E/M.Tech	25/06/2012	Networking	15	0	0	Assistant Professor		11/08/2008	Contractual	Yes		No
14	Deepak Sain	EIVTF3310A	M.E/M.Tech	02/03/2012	Data Mining	12	0	0	Assistant Professor		06/08/2012	Contractual	Yes		No
15	Vivek Sharma	DEKPS8178J	M.E/M.Tech	07/06/2013	Big DATA and AI	20	0	0	Assistant Professor		13/08/2013	Contractual	Yes		No
16	Prof. Nirmal Gaud	BKLPG3152M	M.E/M.Tech	29/06/2013	Privacy and Security	10	0	0	Assistant Professor		26/07/2014	Contractual	Yes		No
17	Prof. Sumeet Dhillon	AIWPD8473E	M.E/M.Tech	26/12/2013	Image Processing	5	0	0	Assistant Professor		12/09/2007	Contractual	Yes		No
18	Dr. Divya Rishi Sahu	DKSPS9726Q	ME/M. Tech and PhD	27/09/2016	Web Security	17	0	0	Assistant Professor		29/09/2018	Contractual	Yes		No
19	Lokesh Sahu	DUFPS7136K	M.E/M.Tech	15/11/2014	Data Mining	5	0	0	Assistant Professor		01/09/2018	Contractual	Yes		No
20	Sandeep Sahu	DTZPS5214R	M.E/M.Tech	25/05/2012	Computer Network	0	0	0	Assistant Professor		01/09/2018	Contractual	Yes		No
21	Prof. Tushar Lone	AMBPL1899B	M.E/M.Tech	24/08/2019	Data Mining	0	0	0	Assistant Professor		01/09/2018	Contractual	Yes		No
22	Abhishek Patel	VWTPP9967K	M.E/M.Tech	26/08/2014	Distributed System				Assistant Professor		01/09/2018	Contractual	Yes		No
23	Piyush Jain	ARUPJ6228L	M.E/M.Tech	01/10/2015	Artificial Intelligence	0	0	0	Assistant Professor		04/09/2018	Contractual	Yes		No
24	Prof. Manali Rajput	BBHPR5985G	M.E/M.Tech	31/08/2013	Information Security	3	0	0	Assistant Professor		19/09/2019	Contractual	Yes		No
25	Sanjeet kumar	CSQPK3444J	M.E/M.Tech	09/05/2016	Web Technology	0	0	0	Assistant Professor		15/10/2018	Contractual	Yes		No
26	Mukesh Azad	AVVPA5088Q	M.E/M.Tech	14/10/2013	Mobile Network	8	0	0	Assistant Professor		15/10/2018	Contractual	Yes		No
27	Dr. Deepti Tamrakar	AZPPT3003L	ME/M. Tech and PhD	02/09/2016	Pattern Recognition	10	0	0	Assistant Professor		01/09/2018	Contractual	Yes		No

28	Chennaiah Kate	BNJPK8963R	M.E/M.Tech	23/05/2011	Pattern Recognition	0	0	0	Assistant Professor		04/09/2018	Contractual	Yes		No
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## 5.1 Student-Faculty Ratio (SFR) (20)

Total Marks 14.00

Institute Marks : 14

## UG

No. of UG Programs in the Department 

BE						
Year of Study	CAY		CAYm1		CAYm2	
	(2019-20)		(2018-19)		(2017-18)	
	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	120	12	120	21	60	12
3rd Year	120	21	60	12	60	12
4th Year	60	12	60	12	60	12
<b>Sub-Total</b>	<b>300</b>	<b>45</b>	<b>240</b>	<b>45</b>	<b>180</b>	<b>36</b>
<b>Total</b>	<b>345</b>		<b>285</b>		<b>216</b>	
Grand Total	<input type="text" value="345"/>		<input type="text" value="285"/>		<input type="text" value="216"/>	

## PG

No. of PG Programs in the Department 

M.Tech						
Year of Study	CAY(2019-20)		CAYm1(2018-19)		CAYm2 (2017-18)	
	Sanction Intake		Sanction Intake		Sanction Intake	
1st Year	18		18		25	
2nd Year	18		25		25	
<b>Total</b>	<b>36</b>		<b>43</b>		<b>50</b>	
Grand Total	<input type="text" value="36"/>		<input type="text" value="43"/>		<input type="text" value="50"/>	

## SFR

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

Description	CAY(2019-20)	CAYm1 (2018-19)	CAYm2 (2017-18)
Total No. of Students in the Department(S)	381 <b>Sum total of all (UG+PG) students</b>	328 <b>Sum total of all (UG+PG) students</b>	266 <b>Sum total of all (UG+PG) students</b>
No. of Faculty in the Department(F)	17 <b>F1</b>	16 <b>F2</b>	14 <b>F3</b>
Student Faculty Ratio(SFR)	22.41 <b>SFR1=S1/F1</b>	19.00 <b>SFR2=S2/F2</b>	20.50 <b>SFR3=S3/F3</b>
Average SFR	20.64 <b>SFR=(SFR1+SFR2+SFR3)/3</b>		
<b>F=Total Number of Faculty Members in the Department (excluding first year faculty)</b>			

**Note:** 75% should be Regular/full time faculty and the remaining shall be Contractual Faculty/Adjust Faculty/Resource persons from industry as per AICTE norms and standards. The contractual faculty will be considered for assessment only if a faculty is drawing a salary as prescribed by the concerned State Government for the contractual faculty in the respective cadre.

### 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(2019-20)	12	15
CAYm1(2018-19)	12	5
CAYm2(2017-18)	11	5

Average SFR for three assessment years : 20.64

Assessment SFR : 14

### 5.2 Faculty Cadre Proportion (20)

Total Marks 20.00



Year	Professors		Associate Professors		Assistant Professors	
	Required F1	Available	Required F2	Available	Required F3	Available
CAY(2019-20)	2.00	2.00	4.00	1.00	12.00	9.00
CAYm1(2018-19)	1.00	2.00	3.00	1.00	10.00	9.00
CAYm2(2017-18)	1.00	2.00	2.00	0.00	8.00	9.00
Average Numbers	1.33	2.00	3.00	0.67	10.00	9.00

Cadre Ratio Marks [ (AF1 / RF1) + [(AF2 / RF2) \* 0.6] + [ (AF3 / RF3) \* 0.4 ] ] \* 10 : 20.00

### 5.3 Faculty Qualification (20)

Total Marks 13.40

Institute Marks : 13.40

	X	Y	F	FQ = 2 x [(10X + 4Y) / F ]
2019-20(CAY)	6	21	19.00	15.16
2018-19(CAYm1)	4	13	16.00	11.50
2017-18(CAYm2)	4	12	13.00	13.54

Average Assessment : 13.40

### 5.4 Faculty Retention (10)

Total Marks 10.00

Institute Marks : 10.00

Description	2018-19 (CAYm1)	2019-20 (CAY)
No of Faculty Retained	11	11
Total No of Faculty	11	11
% of Faculty Retained	100	100

Average : 100.00

Assessment Marks : 10.00

### 5.5 Faculty competencies in correlation to Program Specific Criteria (10)

Total Marks 10.00

Faculty members are specialized in diversified areas of Computer Science and Engineering.

Optimization Techniques

Machine Learning

Cloud Computing

Privacy and security

web services

Web Mining

Data Mining

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**5.6 Innovations by the Faculty in Teaching and Learning (10)**

Total Marks 10.00

Institute Marks : 10.00

Following innovative learning methods are initiated and implemented by the faculty for students to learn in a better manner. 1. Computer-assisted learning 2. Lab Improvement for Future Trends (LIFT) 3. Learn Emerging Advances in Domain Experimentation 4. Group Learning 5. Innovations in Assessment 6. Innovations in Evaluation

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**5.7 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		
	2018-19(CAYm1)	2017-18(CAYm2)	2016-17(CAYm3)
Dr. S.K.Shrivastava	5.00	5.00	5.00
Prof. Ajay Kumar Goyal	5.00	5.00	5.00
Prof. Satish Pawar	5.00	5.00	5.00
Prof. Sandeep Raghuwanshi	5.00	5.00	5.00
Prof. Abhishek Mathur	5.00	5.00	5.00
Prof. ShailaChugh	5.00	5.00	5.00
Prof. Pranita Jain	5.00	5.00	5.00
Prof. Anil Suryawanshi	5.00	5.00	5.00

Prof. Deepak Sain	5.00	5.00	5.00
Prof.Vivek Sharma	5.00	5.00	5.00
Prof. Nirmal Gaud	5.00	5.00	5.00
Prof. Sumeet Dhillon	5.00	5.00	5.00
Dr. Divya Rishi Sahu	5.00	5.00	0.00
Prof. LokeshSahu	5.00	5.00	0.00
Prof. Sandeep Sahu	5.00	5.00	0.00
Prof. Tushar Lone	5.00	5.00	0.00
Prof. Piyush Jain	5.00	5.00	0.00
Prof. Manali Rajput	5.00	5.00	0.00
Prof. Sanjeetkumar	5.00	5.00	0.00
Prof. Mukesh Azad	5.00	5.00	0.00
Dr. DeeptiTamrakar	5.00	5.00	0.00
Prof. Chennaiah Kate	5.00	5.00	0.00
Prof. Abhishek Patel	5.00	5.00	0.00
Dr. Kanak saxena	5.00	5.00	5.00
Prof. UmeshBanodha	5.00	5.00	5.00
Prof. Satyam Maheshwari	5.00	5.00	5.00
Dr. Sunil Joshi	5.00	5.00	5.00
Prof. Satendra Jain	5.00	5.00	5.00
Sum	140.00	140.00	85.00
RF = Number of Faculty required to comply with 15:1 Student Faculty Ratios per 5.1	25.40	21.87	17.73

Assessment [3*(Sum / 0.5RF)]	33.07	38.41	28.76
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Average assessment over 3 years: 33.41

**5.8 Research and Development (75)**

Total Marks 0.00

**5.8.1 Academic Research (20)**

Institute Marks : 0.00

NO

**5.8.2 Sponsored Research (20)**

Institute Marks : 0.00

**2018-19 (CAYm1)**

Project Title	Duration	Funding Agency	Amount(in Rupees)
00	00	00	0.00
			Total Amount(X): 0.00

**2017-18 (CAYm2)**

Project Title	Duration	Funding Agency	Amount(in Rupees)
00	00	00	0.00
			Total Amount(Y): 0.00

**2016-17 (CAYm3)**

Project Title	Duration	Funding Agency	Amount(in Rupees)
00	00	00	0.00
			Total Amount(Z): 0.00

Cumulative Amount(X + Y + Z) = 0.00

**5.8.3 Development activities (15)**

Institute Marks : 0.00

NIL

**5.8.4 Consultancy (from Industry) (20)**

Institute Marks : 0.00

**2018-19 (CAYm1)**

Project Title	Duration	Funding Agency	Amount(in Rupees)
00	00	00	0.00
			Total Amount(X): 0.00

**2017-18 (CAYm2)**

Project Title	Duration	Funding Agency	Amount(in Rupees)
00	00	00	0.00
			Total Amount(Y): 0.00

**2016-17 (CAYm3)**

Project Title	Duration	Funding Agency	Amount(in Rupees)
00	00	00	0.00
			Total Amount(Z): 0.00

Cumulative Amount(X + Y + Z) = 0.00

**5.9 Faculty Performance Appraisal and Development System (FPADS) (10)**

Total Marks 0.00

Institute Marks : 0.00

YES

**5.10 Visiting/Adjunct/Emeritus Faculty etc. (10)**

Total Marks 0.00

Institute Marks : 0.00

NO

**6 FACILITIES AND TECHNICAL SUPPORT (80)**

Total Marks 80.00

**6.1 Adequate and well equipped laboratories, and technical manpower (40)**

Total Marks 40.00

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 Cen	60	Acer Core i5 - 4	22 hours per w	Ms.ShobhaKat	Computer Prog	M.Sc , 'A' level
2	Computer Cen	25	Acer Core i7 - 4	18 hours per w	Mr.Vijay More	LabTechnician	B.Sc
3	Computer Cen	60	Acer Core i5	18 hours per w	Mr. Sunil K Jair	Computer Prog	M.Sc., M.C.A.
4	Computer Cen	25	Acer Core i5 -4	18 hours per w	Mr. Sandeep T	Astt. Computer	M.Sc(Applied M
5	Computer Cen	60	Hardware: HP	18 hours per w	Mr.Manish Shu	Astt. Computer	M.Sc,M.A

### 6.2 Laboratories maintenance and overall ambience (10)

Total Marks 10.00

Institute Marks : 10.00

#### Maintenance of Laboratory Equipments

1. All labs are well equipped with basic facilities.
2. Regular checkup of equipments is carried out at the end of every semester.
3. Data register is maintained in the laboratories.
4. As per the requirement minor repairs are carried out by the lab technical staff.
5. Major repairs are outsourced by following the procedure of the institute.

#### Overall Ambience

1. Department has enough labs which are used for all the years on timetable basis to meet the curriculum requirements.
2. The courses which have practical work will be provided labs every week.
3. Conditions of chairs/benches are in good condition. Chairs are provided for individual students in Labs.
4. Labs are equipped with sufficient hardware and licensed software to run program specific curriculum and off program curriculum.
5. Laboratory manuals are present in the Labs and provided to students.
6. Sufficient number of windows is available for ventilation and natural light and every lab has one exit.
7. Lighting system is very effective, along with the natural light in every corner of the rooms.
8. UPS connections available in Lab in case of power failure.
9. Cup-boards are available in each lab for students to place their belongings.
10. Each Lab is equipped with white/black board, computer, Internet, and such other amenities.

### 6.3 Safety measures in laboratories (10)

Total Marks 10.00

Sr. No	Laboratory Name	Safety Measures
1	Computer Center 1	1. General Rules of Conduct in Laboratories are displayed. 2. Specific Safety Rules for students displayed. 3. First aid box, Fire extinguisher is kept in the laboratory. 4. Well trained technical supporting staff. 5. Avoiding the use of damaged equipment's and provides needful equipment's and components. 6. Periodical servicing of the lab equipment's. 7. Maintain a clean and organized laboratory. 8. Avoiding the use of cell phones. 9. Appropriate storage areas.
2	Computer Center 2	1. General Rules of Conduct in Laboratories are displayed. 2. Specific Safety Rules for students displayed. 3. First aid box, Fire extinguisher is kept in the laboratory. 4. Well trained technical supporting staff. 5. Avoiding the use of damaged equipment's and provides needful equipment's and components. 6. Periodical servicing of the lab equipment's. 7. Maintain a clean and organized laboratory. 8. Avoiding the use of cell phones. 9. Appropriate storage areas.
3	Computer Center 3	1. General Rules of Conduct in Laboratories are displayed. 2. Specific Safety Rules for students displayed. 3. First aid box, Fire extinguisher is kept in the laboratory. 4. Well trained technical supporting staff. 5. Avoiding the use of damaged equipment's and provides needful equipment's and components. 6. Periodical servicing of the lab equipment's. 7. Maintain a clean and organized laboratory. 8. Avoiding the use of cell phones. 9. Appropriate storage areas.
4	Computer center 4	1. General Rules of Conduct in Laboratories are displayed. 2. Specific Safety Rules for students displayed. 3. First aid box, Fire extinguisher is kept in the laboratory. 4. Well trained technical supporting staff. 5. Avoiding the use of damaged equipment's and provides needful equipment's and components. 6. Periodical servicing of the lab equipment's. 7. Maintain a clean and organized laboratory. 8. Avoiding the use of cell phones. 9. Appropriate storage areas.
5	Computer Center MCA	1. General Rules of Conduct in Laboratories are displayed. 2. Specific Safety Rules for students displayed. 3. First aid box, Fire extinguisher is kept in the laboratory. 4. Well trained technical supporting staff. 5. Avoiding the use of damaged equipment's and provides needful equipment's and components. 6. Periodical servicing of the lab equipment's. 7. Maintain a clean and organized laboratory. 8. Avoiding the use of cell phones. 9. Appropriate storage areas.

**6.4 Project laboratory (20)**

Total Marks 20.00

Institute Marks : 20.00

S.No	Name of Facilities	Utilization
1.	Python	For 6 <sup>th</sup> semester students, faculties and research scholars.
2.	Linux	For 5 <sup>th</sup> semester students, faculties and research scholars.
3.	Matlab	For faculties and research scholars.
4.	JAVA	For 3 <sup>rd</sup> semester students, faculties and research scholars.
5.	C/C++	For 1 <sup>st</sup> and 2 <sup>nd</sup> semester students, faculties.

## 7 CONTINUOUS IMPROVEMENT (75)

Total Marks 72.00

## 7.1 Actions taken based on the results of evaluation of each of the COs, POs &amp; PSOs (30)

Total Marks 30.00

Institute Marks : 30.00

**POs Attainment Levels and Actions for Improvement- (2018-19)**

POs	Target Level	Attainment Level	Observations
<b>PO 1 : Engineering Knowledge</b>			
PO 1	2	1.5	Target Not Achieved
a. In, Computer programming and problem solving, Matrices and multi variable Calculus, students had difficulty in understanding concepts. To augment related extra study material were given to the students, Also extra classes were conducted. b. In Physics and Mathematics faculty were advised to include Minute papers, extra quizzes, Tutorials to ensure learning outcomes are met. Open hours are introduced for more interactions with faculty c. More emphasis on tutorial classes and giving assignments of problem solving on fundamentals of Physics, Mathematics and Computer programming fundamentals.			
<b>PO 2 : Problem Analysis</b>			
PO 2	2	1.2	Need Further Improvement.
In Mathematics courses students were provided Questions Banks for more practice. These questions banks will be prepared from entire syllabus and considering previous years' end semester university examinations' question papers			
<b>PO 3 : Design/development of Solutions</b>			
PO 3	2	1.5	Over all Target not achieved
---			
<b>PO 4 : Conduct Investigations of Complex Problems</b>			
PO 4	2	1.5	Need Further Improvement
---			
<b>PO 5 : Modern Tool Usage</b>			
PO 5	2	1.4	Need Further Improvement
The following courses having scope for further improvements Actions Taken: a. extra laboratory assignments were given to enhance the subject knowledge. b. More training is to be provided during subsequent years of study (during II / III / IV year)			
<b>PO 6 : The Engineer and Society</b>			
PO 6	2	1.5	Need further Improvement
a. The students are to be motivated to take care of safety and health issues related to culture, social, legal and environment by providing case studies b. Students were advised to carefully read and implement laboratory safety instructions during the lab performance. Detail safety instructions were also displayed into the laboratory. c. Students are encouraged to participate in societal activities through Blood Donation Camps and other Student Clubs to understand the problems in the society			
<b>PO 7 : Environment and Sustainability</b>			
PO 7	2	1.3	Target Not achieved



a. Presentations were conducted to make them aware and instill belonging ness towards environment and sustainability. b. Case studies related to past and present environmental problems (National and International) were discussed in classes and will be discussed by students and teachers, both through presentation

**PO 8 : Ethics**

PO 8	2	1.5	---
a. Students were motivated to be part of University and Departmental event organizing committee this action helps them to understand togetherness and caring attitude for ethical development. b. News and articles were displayed, involving students, to inspire them. c. Conducted the spiritual classes for personality development.			

**PO 9 : Individual and Team Work**

PO 9	2	1.8	---
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**PO 10 : Communication**

PO 10	2	1.5	Over all Target not Achieved.
Students were encouraged to make class room discussions and role play activity in English (during and outside the class-rooms)			

**PO 11 : Project Management and Finance**

PO 11	2	1.4	Need further Improvement.
---			

**PO 12 : Life-long Learning**

PO 12	2	1.8	Over all Target Not Achieved
Students were encouraged to submit relevant assignment / discuss case studies to instill life-long learning and usages of technology.			

**PSOs Attainment Levels and Actions for Improvement- (2018-19)**

PSOs	Target Level	Attainment Level	Observations
<b>PSO 1 : Apply the knowledge of engineering practices, science and mathematics to propose and apply effective engineering solutions.</b>			
PSO 1	2	1.5	For achievement of target need further Improvement.
In computer programming and problem solving theory as well as lab course more conceptual programming assignments were given to students for better understanding of the subject. Students were provided Questions Banks for more practice. These questions banks will be prepared from entire syllabus and considering previous years' end semester university examinations' question papers			
<b>PSO 2 : Identify suitable hardware/software part to implement algorithms/procedures hence analyze and make inferences from the output.</b>			
PSO 2	2	1.5	Here also room for Improvement.
---			

Curriculum planning and execution

2. Adherence to academic calendar

1. Course Files
2. Quality & Quantity of assignment
3. Tutorials and quizzes
4. Curriculum delivery progress
5. Quality circle meetings

3 Responsible persons to carry out audit

1. Head of Department and Program coordinators
2. Once in a semester

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

Total Marks 10.00

Institute Marks : 10.00

Communication, aptitude and programming skills are mandatory for all the students. Hence in a regular timetable, separate classes for communication skill are embedded from the first year. The classes for programming skill are introduced from the second year and a class for aptitude training is introduced in the third year. At the end of the third year, students are given the choice to opt for campus placement; other choices are being progression to higher studies or entrepreneur. This choice streamlines the students towards his/ her future career guidance.

A. Students who wish to progress towards higher studies are guided in preparing for competitive examinations like GATE, GRE examinations, etc.,

B. Library facility is made available beyond working hours

Training and Placement Intensive placement training is offered only to those who have opted for campus recruitment. The campus recruitment comes under the purview of the placement officer. The placement officer is assisted by a faculty member from the department who act as placement coordinator. Placement coordinators plans and coordinates the activities related to placement training and other activities related to career guidance. The intensive training for campus recruitment covers the following aspects.

1. General and math aptitude tests
2. Communication Skills Enhancement (mandatory in the I & II year)
3. Technical aptitude tests during the III year x Soft skills training including group discussions and mock interviews

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**7.4 Improvement in the quality of students admitted to the program (20)**

Total Marks 20.00

Item		2019-20	2018-19	2017-18
National Level Entrance Examination JEE	No of students admitted	120	120	120
	Opening Score/Rank	47399	57989	68790
	Closing Score/Rank	1000807	1008809	1001020
State/ University/ Level Entrance Examination/ Others NA	No of students admitted	0	0	0
	Opening Score/Rank	0	0	0
	Closing Score/Rank	0	0	0
Name of the Entrance Examination for Lateral Entry or lateral entry details NA	No of students admitted	0	0	0
	Opening Score/Rank	0	0	0
	Closing Score/Rank	0	0	0
Average CBSE/Any other board result of admitted students(Physics, Chemistry&Maths)		0	0	0

## 8 FIRST YEAR ACADEMICS (50)

Total Marks 10.00

## 8.1 First Year Student-Faculty Ratio (FYSFR) (5)

Institute Marks :

Please provide First year faculty information considering load

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			

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)
2017-18(CAYm2)		0		
2018-19(CAYm1)		0		
2019-20(CAY)		0		
<b>Average</b>	0	0	0	0

AverageFYSFR:

Assessment [ (5 \* 15) / AverageFYSFR]:

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

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 ]
2017-18				
2018-19				
2019-20				

Average Assessment:

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### 8.3 First Year Academic Performance (10)

Institute Marks :

Academic Performance	CAYm1( 2018-19 )	CAYm2( 2017-18 )	CAYm3 ( 2016-17 )
Mean of CGPA or mean percentage of all successful students(X)			
Total Number of successful students(Y)			
Total Number of students appeared in the examination(Z)			

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

Assessment = Average API :

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

Total Marks 10.00

#### 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 : 5.00

(Examples of data collection processes may include, but are not limited to, specific exam questions, laboratory tests, internally developed assessment exams, oral exams assignments, presentations, tutorial sheets etc.)

Name of the Department	Course Code	Course Title	Teaching Faculty	Session	Semester	Remark
Applied Maths	BT-1815	Engineering Maths I	Dr. Poonam lata Sagar	2018-2019	I	OK
	BT-1825	Engineering Maths II	Dr. Rajendra Pathak	2018-2019	II	OK
Applied Physics	BT -1821	Engineering Physics	Dr. Sachin Mahajan	2018-2019		Ok
Applied Chemistry	BT -1811	Engineering Chemistry	Dr. Manoj Datar	2018-2019	I & II	Ok
	BT -1824	Energy Environment Ecology & Society	Dr. R. N. Shukla	2018-2019	I & II	Ok
			Dr. Pradeep Sharma	2018-2019	I & II	Ok
Civil Engineering	BT -1822	Basic Civil Engineering & Engineering Mechanics	Tanu Chaturvedi	2018-2019	I	OK
			Suraj Jain	2018-2019	II	OK
Computer Science Engineering	BT -1826	Computer Programming	Sourabh Sharma Sachin kamley	2018-2019	I	Ok
Electrical Engineering	BT -1812	Basic Electrical & Electronics Engineering	Bharat Singh Choudhary	2018-2019	I	Ok
			Bhavna Sharma	2018-2019	II	Ok
Mechanical Engineering	BT -1823	Basic Mechanical Engineering	Prachi Kanherkar	2018-2019	I & II	Ok
	BT-1816	Workshop Practice	R.M. Saxena	2018-2019	I & II	Ok
	BT-1813	Engineering Graphics	Kamlesh Sharma	2018-2019	I & II	Ok
Master of Computer Application	BT-1826	Computer Programming	Narendra Gupta	2018-2019	II	Ok
			Sushil Verma	2018-2019	II	Ok
			Dr. Sachin Kamley	2018-2019	II	Ok
			Sourabh Sharma	2018-2019	II	Ok
Humanities	BT-1814	Communication Skills	Dr. Manorama Saini	2018-2019	I & II	Ok

Program shall have set attainment levels for all first year courses.

(The attainment levels shall be set considering average performance levels in the institution level examination or any higher value set as target for the assessment years. Attainment level is to be measured in terms of student performance in internal assessments with respect the COs of a subject plus the performance in the institution level examination)

Session 2018-2019							
Name of the Department	Course Code	Course Title	Attainment				
			CO1	CO2	CO3	CO4	CO5
Applied Maths	BT-1815	Engineering Maths I	0.58	0.7	0.23	0.53	0.35
	BT-1825	Engineering Maths II	0.50	0.40	0.43	0.44	0.23
Applied Physics	BT-1821	Engineering Physics	0.43	0.38	0.39	0.36	0.58
Applied Chemistry	BT-1811	Engineering Chemistry	0.43	0.494	0.33	0.36	0.25
Civil Engineering	BT-1822	Basic Civil Engineering & Engineering Mechanics	0.49	0.35	0.50	0.31	0.34
Electrical Engineering	BT-1812	Basic Electrical & Electronics Engineering	0.47	0.47	0.31	0.43	-
Mechanical Engineering	BT-1823	Basic Mechanical Engineering	0.49	0.47	0.4	0.48	0.5
Mechanical Engineering	BT-1813	Engineering Graphics	0.62	0.42	0.42	0.45	0.48
Petrochemical Engineering	BT-1824	Energy Environment Ecology & Society	0.6	0.61	0.52	0.5	0.5
Humanities	BT-1814	Communication Skill	0.55	0.49	0.53	0.5	0.5

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

**8.5.1 Indicate results of evaluation of each relevant PO and/or PSO if applicable (10)**

Institute Marks :

**POs Attainment:**

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
Cxxx	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12

**PSOs Attainment:**

Course	PSO1	PSO2
Cxxx	PSO1	PSO2

**8.5.2 Actions taken based on the results of evaluation of relevant POs and PSOs (10)**

Institute Marks :

**9 STUDENT SUPPORT SYSTEMS (50)****Total Marks 50.00****9.1 Mentoring system to help at individual level (5)****Total Marks 5.00****Institute Marks : 5.00**

Type of mentoring: Professional guidance/ career advancement/course work specific/ laboratory specific/ all-round development. Number of faculty mentors: Number of students per mentor: Frequency of meeting:

(The institution may report the details of the mentoring system that has been developed for the students for various purposes and also state the efficacy of such system)

• Mentoring System : Yes

• Type of Mentoring : Tutor Guardian Scheme

- Number of faculty mentors : 138
- Number of students per mentor : 20
- Frequency of meeting : Fortnightly

**Details of the mentoring system**

A faculty mentor is assigned to a group of 20 students to deal with their problems the mentor maintains record of students. The mentor observes the overall growth of student and provides counseling whenever required. The mentor also makes sure to maintain a regular parent-teacher dialogue.

**Efficiency of such system**

The system develops an interaction amongst the students, teachers and parents. The system helps to improve the academic performance of the students. The system provides scope for healthy, positive and stress free state of mind. Teachers are also becoming more responsive to the learner needs day by day which is being reflected in the diary maintained by the teacher. The mentors meet to the students periodically and monitor their performance and their activities. Guidance regarding the lagging issues is provided. Occasionally tutor meeting with the parents is conducted based on the requirement.

**Professional Guidance:**

The department is well equipped with knowledgeable Human resources in the form of members of faculty who by keeping themselves of development, offer guidance to the prospective professionals in addition to the classroom teaching. The Industry- institute Partnership cell and Entrepreneurship development cell have been putting efforts in this direction.

**Career advancement:**

The Training and Placement cell has been active not only in arranging campus recruitment drives, but also offering awareness and training for the students Course work. Members of faculty handling different courses interact with students in clearing all their Concept-oriented and test based mechanics of the respective courses. The teachers after first of formative evaluation guide the students as far as student- specific gray areas are concerned.

**Lab-specific:**

Each of the lab sessions are handled by 2 Teachers in order to have special care for the students(batch size 30) while experiments are being handled. A demonstrative presentation is given by the teacher concerned before every experiment. The Laboratory records are evaluated after the experiment is held. In other words, there is active involvement of the faculty members at Pre-experiment stage, at the time of experiment and after the experiment.

**Total Development:**

As stated above, the college puts forward efforts to realize total development of the student. In addition to academics, literary, cultural and sports activities are conducted which offer leadership qualities, decision making abilities, team spirit, precision, analytical capabilities, socio- psychological awareness etc. which make an individual a intellectually mature being.



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**9.2 Feedback analysis and reward /corrective measures taken, if any (10)**

Total Marks 10.00

Institute Marks : 10.00

Feedback collected for all courses: YES/NO; Specify the feedback collection process; Average Percentage of students who participate; Specify the feedback analysis process; Basis of reward/ corrective measures, if any; Indices used for measuring quality of teaching & learning and summary of the index values for all courses/teachers; Number of corrective actions taken.

Feedback collected for all courses (Yes/No): Yes

**Specify the feedback collection process:**

A standard feedback questionnaire is collected from the students every semester course wise. At the end of semester, department conduct end course survey in order to take the feedback about the facilitators as well about the effectiveness of course. Apart from this exit survey is also conducted for passing out student

Number of Feedback Items : 20  
Frequency of feedback collection : Once in a semester. Feedback collection Hard-copy : Yes.  
Average percentage of students who participates : above 80%

**Feedback analysis Process:**

1. The feedback analysis is done manually
2. Collected feedback is scrutinized at department level.
3. The feedback is quantified
4. All the parameters mentioned in the feedback form is analyzed.
5. Ability of teaching with respect to each item and comprehensive ability of the teachers is analyzed
6. All the comments written by the students in the feedback forms is communicated to the respective faculty members along with their feedback levels to know their strengths and weaknesses and to enhance their teaching skills.

**Basis of reward/corrective measure:**

1. Faculty members who get average feedback identified and provided with induction program and faculty development program.
2. Also the faculty members who get better feedback appreciated by management on Independence day & Republic day

Assessment is based on student feedback collection, analysis and corrective action taken.

1. Student's feedback on facilities such as class room ambiance, furniture, is satisfactory.
2. Student's feedback on facilities such as library, no of books to be increased. We have increase purchase of books for central library.
3. Student's feedback on facilities such as speed of internet to be improved. We have increased the band width & procured another WiFi network (Jio).

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#### 9.4 Self-Learning (5)

Total Marks 5.00

Institute Marks : 5.00

- The curriculum offers courses like, minor project, major projects where the topics are self-selected or based on guide suggestion. The component of self-learning is evaluated in these courses.
- Seminars, conference, workshop & guest lecturers were organized.
- In every lecture 5-10 minutes discussion on new technology and its application in real life that is beyond the syllabus is discussed for improvement & innovation.
- Every student has to submit a home assignment in every course which has been evaluated for 10 marks. Some of these tasks are beyond syllabus to encourage out- standing students to develop their self-learning capabilities.
- Department library with sufficient number of volumes on core and application areas, technology awareness journals are opened during college working hours. IPR Cell, Innovation Club, Centre of Excellence has been established in Institute Swayam & Swayam Prabha courses are also available. T.V. Set at prominent locations has been installed to watch the online lecture.
- E-notes has been prepared by the department faculty and maintained by the department faculty for the development of students for all subjects in our department.
- Apart from the above, the college actively promotes self-learning through the following resources procured through NPTEL, QEEE and other Audio-Video content:

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#### 9.5 Career Guidance, Training, Placement (10)

Total Marks 10.00

Institute Marks : 10.00

(The institution may specify the facility, its management and its effectiveness for career guidance including counseling for higher studies, campus placement support, industry interaction for training/internship/placement, etc.)

The Career guidance cell and Training & Placement department in coordination with Student section Counselors keeps students abreast with the opportunities of higher studies & placement on regular basis. The team for Career counseling comprises of departmental Representatives.

#### Functions of the Departmental Representative

1. To arrange Seminars / Workshops on Career opportunities
2. To conduct mock tests for competitive examinations.
3. To arrange interactive sessions between alumni and students.

4. To procure study material and make it available in the Library/Intranet.

5. Display of Posters, Notices relating to Opportunities

#### Details of activities organized by placement cell year 2018-19

1. Employability Skill Training run by T&P Cell for betterment of students.

2. GATE Training run by T&P Cell for students who are interested in Higher Education and to face competitive GATE exam .

3. 2 days Workshop on Employability Skill on 19-20 Jan, 2019.

4. Employability Skill Test by Aspiring Minds for 1455 students.

#### Selections through campus Drive during 2018-19

S.NO	Name Of Company	Selections
1	Zensar Technologies	8
2	Argusoft	0
3	Xoriant Technologies	1
4	Prism Johnson	6
5	Capgemini	48
6	Tata AIG	2
7	TCS Mumbai	36
8	Trading Bells	11
9	Matrix Inc.	0
10	UNO TECH.	0
11	LG Soft	0
12	Relince Jio	1
13	BORL	2
14	Infosys	9
15	Cognizant	2
16	LG Soft	0
17	Kotak Mahindra	8
18	Opentext	0

19	GR Infra	3
20	Matrix Inc.	0
21	Research Panel Indore	5
22	Infostretch Corporation (India) Pvt Ltd.	1
23	Zyacus	0
24	Rippls Advisory indore	15
25	Kalka IPS Academy	2
26	Calsoft	2
27	Infosys	1
28	Insta Printz	1
29	Mount Blue	0
30	BBB	0
31	Azim Prem Ji Foundation	0
32	AU Bank	0
33	Tech. Mahindra	2
34	50 Hertz	1
<b>TOTAL SELECTIONS</b>		<b>167</b>

#### Placement Details of 5 years

Year	No of Companies Visited in closed/pool)	No of students placed (Open campus drive)		No of students placed (Open campus drive)		No of students placed		Total Placement
		Engineering	Non Engineering	Engineering	Non Engineering	Engineering	Non Engineering	
2018-19	34	151	16	13	-	151	16	167
2017-18	31	102	23	7	0	109	23	132
2016-17	32	70	5	28	0	98	5	103
2015-16	19	182	22	0	0	182	22	204
2014-15	33	169	13	20	18	189	33	222

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**9.6 Entrepreneurship Cell**

Total Marks 5.00

Institute Marks : 5.00

(The institution may describe the facility, its management and its effectiveness in encouraging entrepreneurship and incubation) (Success stories for each of the assessment years are to be mentioned)

In our institute entrepreneurship development cell is organizing workshop on entrepreneurship. Through entrepreneurship development cell interaction with the entrepreneur is organized. Through entrepreneurship development cell competitions are arranged for new innovative business ideas. The entrepreneurship Development Cell has been organizing workshops and seminar for the benefit of students. The EDC Cell invites speaker, Entrepreneurs to share their experiences and also invites professionals from Banks, Federation of Commerce and Industry to motivate and educate students on Entrepreneurship.

**Vision and Ideology of the E-Cell Vision**

To stimulate, support and sustain all initiatives and endeavors of students, which will lead to generation of entrepreneurship based on Engineering and Technology

**Ideology**

- To motivate and inspire students to take up the challenge of entrepreneurship
- To equip them with necessary skills and provide all possible assistance
- To promote creative thinking and an entrepreneurial mindset among the students
- To promote innovations and help convert them into market accepted Products

**Activities undergoing in E- Cell:**

The E-cell Organizes lectures, workshops and seminars by renowned personalities from different domains of expertise, competitions of various kinds etc. round-the-year in order to create awareness and to sharpen business acumen of students and aspiring entrepreneurs. Mentor students / new faculties who have business ideas by bringing expertise to their doorsteps.

The E-cell is network hub for students aspiring to be entrepreneurs and also play a role in team building as a part of its mentorship. Mentoring the students at an early stage by giving proper direction and necessary exposure would be crucial in converting technical ideas/projects into viable business plans It is an interface between the entrepreneurial activity in institute and the outside world, a consolidation of logistic and knowledge resources necessary to make a business plan and set up an enterprise. Form permanent associations with professional bodies and organizations, Universities, corporations, media etc. to facilitate exchange of ideas and to promote entrepreneurial ventures. Knowledge partnerships will play an important role in engaging good expertise for the benefit of entrepreneurial activity at institute. Associations with venture capital firms and seed funds would be crucial in the setup of new ventures. To achieve the above objectives the E-Cell will focus on some initiatives to foster the spirit of entrepreneurship in the following ways.

**Innovation club:**

In It is aimed at nurturing innovation at the grassroots level, it is an organized group of selected students getting together to discuss each other's ideas. This discussion is now being done on a wiki page. The discussion helps the students stay motivated to work on their idea as well as helps build their idea into something feasible.

**In-house Events/competition:**

To motivate student towards entrepreneurship, e-Cell will regularly conduct in-house competition of various events such as business idea competition, case study competition, Business quiz, brand watch, innovation approach, best out- of- waste competition, innovation approaches in IT industry, new ventures lunched and their idea and profile, story writing of successful entrepreneur, Expose the youth to the latest innovations and entrepreneurial success stories etc.

**Start up cell:**

To connect the students with the start-ups through which start-ups get an opportunity to interact with the students and pitch their ideas to the panel of Venture Capitalists and the students get hired for summer internship.

For Smooth functioning of E-cell and carry out strategic planning with aligning our vision and mission and promote of E-cell, we should have team of following:

**a. Faculty Coordinator :**

There is a faculty coordinator whose role will is to see day to day affair of E-cell and organize the different events and competition. He is responsible to promote E-Cell and work under the guidance of Director. He is responsible to work according to vision and mission of the cell.

**b. Student Team:**

There is a student Coordinator, and Secretary cum treasurer from the student community, who will work under the guidance of committee member. They are responsible for monitoring E-cell activities and initiatives. They remain in touch various students of E-cell and other Entrepreneurship network establish in different institute.

**9.7 Co-curricular and Extra-curricular Activities**

Total Marks 10.00

Institute Marks : 10.00

(The institution may specify the co-curricular and extra-curricular activities)(Quantify activities such as NCC, NSS etc.)

**NCC ACTIVITIES FROM DEC 2018 TO DEC 2019**

S. NO.	DATE	ACTIVITY
	126.01.19	REPULIC DAY PARADE AT POLICE GROUND VIDISHA
	221.06.19	INTERNATIONAL YOGA DAY CELEBRATION
	323.07.19	PLANTATION AT NCC PARK IN COLLEGE CAMPUS
	426.07.19	KARGIL VIJAY DIWAS(MOVIE SHOW)

515.08.19	INDEPENDANCE DAY CELEBARATION AT COLLEGE
602.10.19	GANDHI JAYANTI CELIBRATON
701.11.19	DIAMOND JUBLEE CELEBRATION (FLAG HOSTING)
805.12.10	SWACHH BHARAT ABHIYAN(MONUMENTS CLEANING)
919.06.19 To 28.06.19	CATC CAMP
1021.09.19 To 30.09.19	CATC CAMP

For the overall development of the students, the institute organize Techfest, Samrat Utsav, State level inter engineering college cricket tournament every year in this we organize different events like, cultural. Sports, painting, competitions through various committees. A student's newsletter and magazine is also published to exhibit their talent.

#### Co-curricular Activities

Engineers Day, Mathematics Day, Rashtriya Yuva Divas, International Yoga day ,Teachers Day, Women Day, World- Water Day, Earth Day, World Book Day, Press Freedom Day,world Science Day,

Quiz Competition

Tech Fest (SATYARTH)

Seminars, Workshop,

Conference & Guest Lecture (at least once in a session in each department) Institute is registered for NSS, & University Youth Festival for sports and cultural activities. Yearly excursion cum Industrial tours is conducted for students wherein students are taken to various places of interest.

#### Extra-curricular activities are:

Activity	Detail of activities
Annual Festival (SAMRAT UTSAV)	Extempore, Mehndi Competitions, , Poster Competition, Classical / Fusion Dances, Quiz, Poetry, Debate, Essay, Painting, Sketching, Photography, Robo competition, Dance ( Group &Solo), Singing (Group &Solo), skit competition, Nukkad Natak, Rangoli etc.
Sports activities	Sports Competition (kabbadi, Volley Ball ,Hand Ball, Badminton ,Cricket, Foot Ball, Kho-Kho, Chess, carom, Table Tennis, Lawn Tennis, & Athletics, Annual Festival (SAMRAT UTSAV)
Social activities	Blood Donation Camps, Rallies, Nukkad Natak on social issues, and Tree plantation.



Independence Day, Republic Day, Ganesh Utsav, Rose Show, Bhajan  
Sandhya, Vishwakarma jayanti,

Other

Sandhya

Inter Engineering  
College Competitions

State level Inter Engineering college cricket tournament.

Foundation Day

Alumni meet

**Games and Sports facilities, and qualified sports instructors (5)**

**Outdoor –**

1. Kabaddi
2. Volley Ball
3. Hand ball
4. Badminton
5. Cricket
6. Football
7. Kho-Kho

**Indoor –**

1. Chess
2. Carom
3. Table Tennis
4. Gymnasium

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10 GOVERNANCE, INSTITUTIONAL SUPPORT AND FINANCIAL RESOURCES (120)

Total Marks 115.00

10.1 Organization, Governance and Transparency (55)

Total Marks 55.00

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

Institute Marks : 5.00

**Vision** : To contribute towards service and development of the mankind through quality education and research, in the area of science and technology.

**Mission** : To create quality manpower equipped with technical skills ,social values, leadership, creativity and innovation for the benefit and betterment of mankind and sustainable development of the nation.

#### 10.1.2 Availability of the Institutional Strategic Plan and its Effective Implementation and Monitoring (25)

Institute Marks : 25.00

Institutional strategic plan has been made by performing deep analysis of Strength, weakness, Opportunity and Threat of the institute. Several meetings and interactions with Management, Director, Dean Academic, Dean Research, Registrar, all HoDs, Faculties, Supporting staff, Students, Parents and Alumni were held for the same. Following key points about institute were discussed to carry out the analysis-

- Infrastructure/Laboratory/Equipment/Workshop
- Research/Consultancy
- Placement Cell
- Industry interaction
- Workshop/Training Programme for Faculty/Staff/Students
- Mentorship Programme for the students
- Active & Innovative Learning Process
- Outcome based Curriculum
- Admission policies/Fee Structure
- TEQIP-III
- MoU with Reputed Institutes/Industries
- E-Learning/Library
- Skill Development Programme
- Unnat Bharat Abhiyan
- Moodle
- Sports/clubs/Activities/social Service
- Awards/Scholarships
- IT Infrastructure/ digital technology
- Security
- Woman grievance & redressal

After several brainstorming session by keeping above key points in mind, following strategy plans and its implementation & monitoring have been set up that transform S.A.T.I., Vidisha into globally recognize technical institute-

Sr. No	Strategy Plan	Implementation	Monitoring
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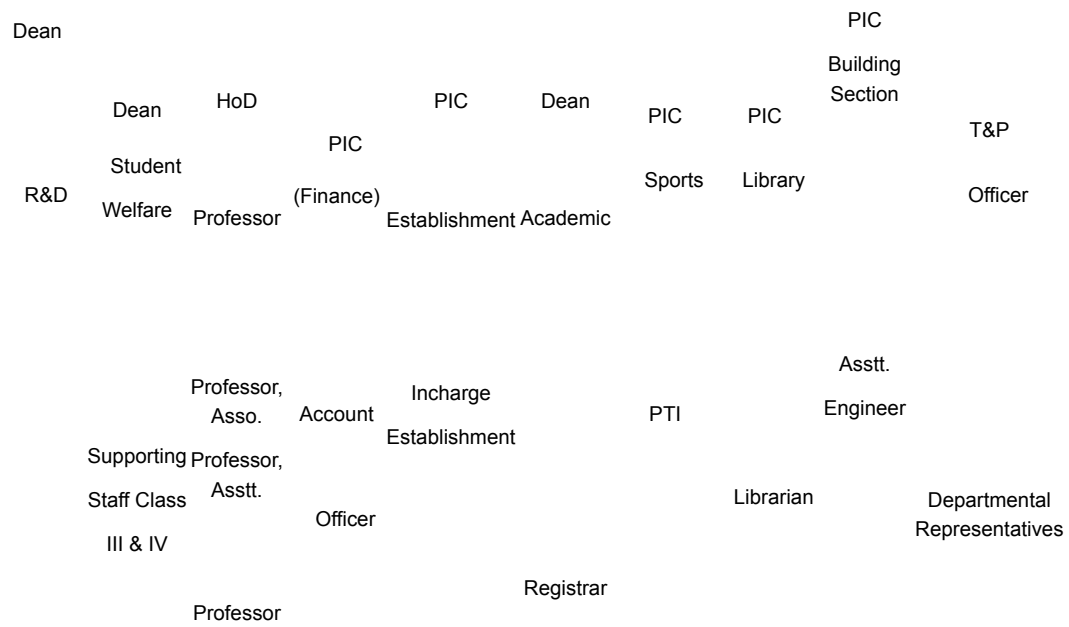
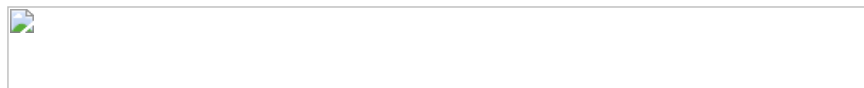
1	To improve teaching learning environment	<ul style="list-style-type: none"> <li>• Set up of new Smart Class Rooms</li> <li>• Adoption of Moodle</li> <li>• Use Moocs/NPTEL for e learning</li> <li>• Arrange Expert Talks</li> <li>• Interaction with industry person</li> <li>• Provide Career Guidance to students</li> <li>• Use service of Adjunct faculty</li> <li>• Successful implementation of OBE</li> </ul>	Director of the institute, Dean academic and HODs visit the class rooms, labs daily in order to make healthy academic environment and make sure successful implementation of outcome based education in the campus. In additions to the regular classes, expert talks on emerging areas also arrange weekly in the institute. Daily attendance, assignment, quizzes are uploaded on Moodle and noticed by director and HODs.
2	To improve laboratory/ library	<ul style="list-style-type: none"> <li>• To setup new labs on emerging areas.</li> <li>• To setup modern Lab for research</li> <li>• Rich library resources such as reputed journals/ new books</li> </ul>	Meeting of HODs , Dean academic , Dean research arrange once in each semester for setting up new labs or purchasing of new equipment.  In-charge library regularly ask for new books/e-journal from faculties & students and arrange them in the library.
3	To enhance research culture	Funds/Workshop/Training have been arranged for the faculty/students in order to attract funded research project/consultancy	Every month Dean research arrange the meeting with director of the institute and encourage the faculty to create the research culture in the institute, arrange the workshop/training/expert talk on emerging areas
4	To enhance interaction with reputed institute	MoU with reputed institute/company has been set up to joint research & exchange of human resources	MoU with reputed institute / industry is decided in the meeting of BOG
5	To provide mentorship to students	Proper assistance is provided by TGs to the needy students in all areas such as study, fiancé, career etc	Meeting between TGs & students takes place daily and resolve various problems of students
6	To start new PG programs in emerging areas	For enhancement of research culture in the institute	Director of the institute arrange the meeting every month with Dean Academic, Dean Research and HODs and try to find the emerging areas for witch new courses can be launched

7	To obtain accreditation for various courses	Applied for NBA accreditation and prepared for that	Coordinator of NBA arrange the meeting once in a week of Head of the departments to be accredited with director and assess the status of preparation of accreditation
8	To improve quality of campus	Various steps have been taken to provide world class infrastructure in the institute such as digital technology used in every section/ high speed wi-fi/ lush green campus/ smart class rooms/ central library/ computer centre/ higenic hostels/ playgrounds/ indoor stadium/ auditorium /security/electrical maintenance	In-charge of various section such as building section, hostel warden, computer maintenance , security officer, electrical maintenance etc continuously supervise the concern section and keep the campus up-to-date for easy and better life
9	To improve students placement	Communication has been setup with various MNCs such as TCS, Infosys, IBM, Cap Gemini etc. for campus drives at the institute	Placement team continuously interact with HR of various MNCs for campus recruitment, arrange various career oriented programme at institute.
10	To increase Sports activity/social services	National level sports and cultural & technical activities have been organized. Institute participates and organize various national and international level activities such as Energy day, Science day, Yoga day, Woman day. Technical day etc.	PIC Sports & PTI interact regularly with students and arrange facilities of sports, encourage the students for participation at national level competitions. Coordinators of each clubs meet weekly and decide activities to be performed at institute level.
11	Trained students under Skill Development Program	More students have been trained under various schemes of central and state government such as PMKVY & MMKVY	Coordinator of S&D visits the class rooms regularly and assess the performance of trainee, and arrange better environment to improve themselves.
12	To improve the quality of rural areas under the "Unnat Bharat Abhiyan"	Institute is participating in full sprit under "Unnat Bharat Abhiyan" for the development and betterment of rural area	Coordinator of Unnat Bharat Abhiyan takes the meeting of concern faculty & students and make the plan weekly for the betterment of rural areas

**Board of Governors (B.O.G.)**

**Committee formed by BoG**

**Director & Member Secretary**



Supporting	Supporting	Supporting	Supporting	Supporting	Supporting	Supporting	Supporting	Supporting	Supporting
Staff Class	Staff Class	Staff Class	Staff Class	Staff Class	Staff Class	Staff Class	Staff Class	Staff Class	Staff Class
III & IV	III & IV	III & IV	III & IV	III & IV	III & IV	III & IV	III & IV	III & IV	III & IV

For the smooth functioning of administration, following committees are formed.

#### 1. Administrative Committee

##### i. Board of Governors

S. No.	Member list	Frequency of Meeting
1.	Shrimant Shri Jyotiraditya M. Scindia	Minimum Two meetings per year. However, the meeting may be scheduled as and when necessary.
2.	Sh. Motilal Vora	
3.	Dr. Laxmikant Markhedkar	
4.	Er. Ramesh Agrawal	
5.	Justice (former ) N.K.Modi	
6.	Dr. K.K. Agrawal, Founder Vice-Chancellor of Indraprastha University	
7.	Sh. Bharat C Chhparwal, Ex-Vice-chancellor, DAVV, Indore	
8.	Sh. Prashant Mehta (IAS retd.)	
9.	Sh. Bimal Julka IAS	
10.	Sh. Mahendra Sethia (Industrialist), Indore	
11.	Dr. Anoop Raj (Educationalist) New Delhi	
12.	Finance Secretary, Govt. of MP	
13.	Principal Secretary, Technical Education & Skill Development, Govt. of MP	

14.	Dr. N.C. Shivaprakash (AICTE Nominee)
15.	Dr. C.M. Chittle (UGC Nominee)
16.	Vice-Chancellor, RGPV, Bhopal
17.	Director
18.	Institute Professor
19.	Institute Professor

#### Function and Responsibility

1. To manage the affairs of the S.A.T.I. (Degree) & to regulate its expenditure.
2. To determine the cadre and grades of the Departments and to create, suspend or abolish posts and to fix the emoluments and the terms of service of the employees of the Institute.
3. To appoint all staff in accordance with the regulations drawn up for the purpose.
4. To grant leave and allowance to determine conditions of service to enter into service contracts and grant extension of service to staff.
5. To impose penalties on the staff in accordance with the procedure laid down, for the purpose.
6. To consider the annual report and audited accounts for the previous financial year and the budget estimates of the ensuing year and to take decision thereon.
7. To appoint qualified auditors every year and to fix their remuneration.
8. The decision of the Governing Body in all matters pertaining to the managements of the Institute should be final and should not be subject to any revision by the Society or by any other organization under it.

#### Managing Committee

Member list	Frequency of Meeting
Shrimant Jyotiraditya M. Scindia, Chairman	Periodically
Dr. Laxmikant Markhedkar, Secretary	
Er. Ramesh Agrawal, Member	
Justice (former ) N.K.Modi, Member	
Sh. Prashant Mehta (IAS retd.) , Member	
Director ,S.A.T.I. Vidisha, Member	

#### Function and Responsibility

- a. Subject to the general control of the Board of Governors the day to day administration and management of the Institute established by the society shall be entrusted to a Managing Consisting of not more than five members which may exercise such powers as may be delegated to it by the Society.
- b. The Board of Governors may from time to time nominate one Managing Committee for each of the institution run by it and shall also nominate its office bearers from amongst the nominated members. The Board of Governors shall be free to include in the Managing Committee such persons as may not be the members of the society.
- c. The term of office of the members of a Managing Committee as nominated shall be one year from the date of nomination.

(2) **Academic Committees** : Following committees are constituted for academics matters of the institute.

- i. Academic Affair Committee

Member list	Function and Responsibility	Frequency of Meeting
Dr. J.S. Chauhan	To take decisions on all academic and routine administrative matters.	Twice in a month
Dr. Pankaj Agarwal		
Dr. Sanjay Katarey		
Dr. Kanak Saxena		
Dr. R.N. Shukla		
Dr. Pramod Sharma, Dean (Academic)		
Dr. Shailesh Jalori		
Dr. Shailendra Shrivastava		
Dr. Rajeev Jain		
Dr. Jitendra Parashar		
Dr. Jyotsna Ogale		
Dr. Manorama Saini		
Prof. Sudhir Phulambrikar		
Special Invitees		

## ii. Proctorial Board Committee

Member list	Function and Responsibility	Frequency of Meeting
Dr. Lokesh Bajpai	To deal with cases of student conduct and discipline and decide suitable action	Periodically as and when required.
Dr. Sanjay Bhandari		
Dr. Pramod Sharma (Dean Academic)		
Dr. Shailendra Shrivastava		
Prof. C.S. Sharma		
Dr. Manorama Saini		
Prof. S.S. Goliya		
Dr. Umesh Banodha		
Er. Praveen Karkare (Registrar)		
Special invitee (if any)		



(3) Being an autonomous institute, following Academic Autonomy Committees have been constituted under Statue-37 of Rajeev Gandhi Prodhogiki Vishwavidhlaya, Bhopal

(i) Governing Body

Member list	Function and Responsibility	Frequency of Meeting
Three members to be nominated for a period of 2 years by the management of the college of whom one shall be the chairman. The person so nominated shall include at least one outstanding educationist/ scientist/ technocrat/ jurist/ management expert	To lay down service conditions, regulates and enforce discipline among staff, Financial management and other academic and administrative matters.	Thrice in a year
Two senior most teachers of the college to be nominated by rotation according to seniority, by the Director/ Principal for a period of two years		
One nominee of the University not below the rank of Professor		
One nominee of the State Government		
one nominee of the University Grant Commission; and		
The Principal of the college – Ex-officio Member-Secretary		

(ii) Academic Council

Member list	Function and Responsibility	Frequency of Meeting
The Director/Principal of the College – Chairperson	To finally approve course of study, scheme of examination and syllabus. Maintain academic standard.	Once in a year
All Heads of Departments-Member		
One Professor from each of the Department by rotation for a period of one year according to seniority-Member		
One Reader from each Department by rotation for a period of one year according to seniority-Member		
Three University representatives nominated by the Vice Chancellor-Member		
Director of Technical Education or his nominee-Member		
The Chairman and the Secretary of the Governing Body-Member		
Dean (Academic)		

(iii) Board of Studies (In each Department)

Member list	Function and Responsibility	Frequency of Meeting
Head of the Department of the subject in the University or his nominee	To take decision on examination related matters, recommend syllabus scheme etc.	Once in a year
Head of the Department of the subject concerned in the college, not below the rank of the reader,		
Not more than two Faculty Members of that subject in the college		
Not more than two experts from outside the College/ University.		

In addition to these committees, other committees are also constituted for specific purposes. Academic departments also have committees at department level.

#### Service Rules and Policies :

The institute, being a government aided institute, adheres to all the service rules and procedure as notified by the government of Madhya Pradesh and amended from time to time. The selection and promotion of teachers is as per AICTE (All India council for Technical Education) norms and as approved by government of Madhya Pradesh and BoG of the Institute. Selection of teachers is done by a selection committee constituted as per norms of AICTE and Government of Madhya Pradesh. Reservation for SC/ST/OBC and Other classes in recruitment and promotions is provided as per state government policy and Roster.

#### 10.1.4 Decentralization in working and grievance redressal mechanism (5)

Institute Marks : 5.00

Administrative powers have been delegated to senior faculty members by appointing them as Dean, Co Dean, Professor In Charges of different sections and activities. All the matters pertaining to any section or activities is placed before concern Professor Incharge or Dean for disposal who dispose the matter in consultation with the director or the management.

List of faculty members with administrative responsibilities is given below:

Member list	Administrative Responsibility	Function
Dr. Sanjay Bhandari	Dean Student Welfare	All matters related to student welfare and discipline
Dr. Sanjay Katarey	Coordinator, NBA Accreditation	NBA Accreditation
Dr. Kanak Saxena	Professor-in-Charge Establishment section	All service matter of the employees
Dr. Pramod Sharma	Dean Academic	All academic matters
Dr. G.R. Chetty	Placement Officer	Carrier guidance, Placement, Industrial training and Interaction

Dr. Rajeev Jain	Professor-in-Charge Library section	Supervision of Central Library
Dr. Shailesh Jalori	Professor-in-Charge Account section	All financial planning control, Budget
Shri Sudhir Phulambrikar	Controller Examination	Conduction of examination as autonomous institute of RGPV, Bhopal
Dr. S.S. Goliya	Professor-in-Charge Student Scholarship section	Scholarship Affairs
Dr. Umesh Banodha	Professor-in-Charge Security section	Supervision of campus security
Shri Sanjay Saraswat	Professor-in-Charge Vehicle, Water supply, Building section, Sports	Construction and maintenance, vehicle maintenance and campus water supply, sports activities
Dr. Sunil Joshi	Professor-in-Charge Computer Maintenance section	Supervision and maintenance of hardware and software
Shri Praveen Karkare	Public Information Officer	To provide information under RTI act.

Grievance Redressal System : All the Staff member (faculty and supporting staff) can place their grievance to the competent higher authorities. Staff members can meet with the director and management regarding their demand and grievance for which administration always resolve sympathically in the best interest of the institute and employees. Every Saturday has been reserved by the Director for such meetings. Similarly all students can meet dean student welfare or any concerned teacher or director for their grievances.

A separate women grievance cell has been constituted under the chairpersonship of a senior woman faculty member with representation of other women employee and one girl student representation each from UG and PG classes. The cell specially hear cases related to grievances of women employees and students and recommends suitable action to the authorities.

 2019-05-25 004 Office Order (378).jpg

The institute has zero tolerance policy towards ragging. Anti ragging committees has been constituted comprises of faculty members to keep a strict watch on any undesirable activities and prevent any incidence of ragging or harassment.

 2019-08-01 001 Anti ragging Duty Chart (1057).jpg

**10.1.5 Delegation of financial powers (5)**

Institute Marks : 5.00

In order to have smooth functioning and speedy disposal, financial power have been delegated at different level as given below.

Head of the Departments	:	up to Rs. five thousand
Director	:	up to Rs. Fifty thousand
Managing Committee	:	above One lac

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

Institute Marks : 5.00

All the important information about the Institute like fee, admission, hostel, important student notice, recruitment notice, tender notice employee details etc are available on the Institute web site [www.satiengg.in](http://www.satiengg.in). The information on the website is updated regularly.

Being a government aided Institute, Right to Information act has been in force since its implementation by the government of Madhya Pradesh. All the provision of the act are being followed in the Institute. Any type of information can be sought under the right to information act. All the mandatory information under the act has been uploaded on the Institute web site under link " Right to Information". As per the provision of the act, following officer are appointed as information officer and appellat authority.

Public Information Officer	:	Er. Praveen Karkare, Registrar
Asst. Public Information Officer	:	Shri Rakesh Sagar, Computer Programmer
First Appealant Authority	:	Dr.J S Chauhan, Director

Details of above officials with their mobile numbers are displayed at the prominent places of the Institute.

**10.2 Budget Allocation, Utilization, and Public Accounting at Institute level (15)**

Total Marks 10.00

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 2018-2019**

Total Income 32720325				Actual expenditure(till...): 24998990			Total No. Of Students 467
Fee	Govt.	Grants	Other sources(specify)	Recurring including salaries	Non Recurring	Special Projects/Anyother, specify	Expenditure per student
14914600	0	10771625	7034100	13410774	79903	11508313	53531.03

**Table 2 - CFYm1 2017-2018**

Total Income 28501172				Actual expenditure(till...): 24316362			Total No. Of Students 400
Fee	Govt.	Grants	Other sources(specify)	Recurring including salaries	Non Recurring	Special Projects/Anyother, specify	Expenditure per student
14834805	0	8266667	5399700	16562818	305299	7448245	60790.90

**Table 3 - CFYm2 2016-2017**

Total Income 25113932				Actual expenditure(till...): 20709877			Total No. Of Students 332
Fee	Govt.	Grants	Other sources(specify)	Recurring including salaries	Non Recurring	Special Projects/Anyother, specify	Expenditure per student
12866065	0	8266667	3981200	15320319	3151329	2238229	62379.15

**Table 4 - CFYm3 2015-2016**

Total Income 20448432				Actual expenditure(till...): 21413851			Total No. Of Students 266
Fee	Govt.	Grants	Other sources(specify)	Recurring including salaries	Non Recurring	Special Projects/Anyother, specify	Expenditure per student
9689205	0	8212167	2547060	18900362	653203	1860286	80503.20

Items	Budgeted in 2018-2019	Actual Expenses in 2018-2019 till	Budgeted in 2017-2018	Actual Expenses in 2017-2018 till	Budgeted in 2016-2017	Actual Expenses in 2016-2017 till	Budgeted in 2015-2016	Actual Expenses in 2015-2016 till
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Infrastructure Built-Up	210000C	520095E	126000C	980038C	1160000	859805E	6500000	464245E
Library	200000C	1298202	150000C	1195782	500000C	353418E	500000	303170
Laboratory equipment	500000C	361206E	200000C	171047E	200000C	1989552	500000	280000
Laboratory consumables	0	0	0	0	200000C	158758E	0	0
Teaching and non-teaching stal	248700C	1138101	250500C	2406354	234000C	222267E	2233500	212955E
Maintenance and spares	150000C	940483	500000	442930	100000	12685	0	0
R&D	200000C	826022	210000C	1849172	150100C	144331E	0	0
Training and Travel	750000	348236	500000	473717	100000	58339	0	0
Miscellaneous Expenses*	683920C	489171E	726000C	517914E	260750C	233247E	2955000	275695C
Others, specify	300000C	190369E	200000C	181637E	600000C	349733C	0	0
<b>Total</b>	<b>2422342000</b>	<b>238182714</b>	<b>380300000</b>	<b>341457471</b>	<b>454975000</b>	<b>284219681</b>	<b>260400000</b>	<b>245751081</b>

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**10.2.1 Adequacy of budget allocation (5)**

Institute Marks : 5.00

The allocated budget is sufficient to meet the financial need of the institute. However due to decline in Grant in recent years, financial status is a bit strain.

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**10.2.2 Utilization of allocated funds (5)**

Institute Marks : 5.00

The fund allocated in the budget has been utilized as per the budget provisions.

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**10.2.3 Availability of the audited statements on the institute's website (5)**

Institute Marks :

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**10.3 Program Specific Budget Allocation, Utilization (30)**

Total Marks 30.00

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 2018-2019**

Total Budget 56700000		Actual expenditure (till...): 25120344		Total No. Of Students 467
Non Recurring	Recurring	Non Recurring	Recurring	Expenditure per student
10000000	46700000	4515085	20605259	53790.89

**Table 2 :: CFYm1 2017-2018**

Total Budget 41750000		Actual expenditure (till...): 39037195		Total No. Of Students 400
Non Recurring	Recurring	Non Recurring	Recurring	Expenditure per student
2500000	39250000	2138098	36899097	97592.99

**Table 3 :: CFYm2 2016-2017**

Total Budget 40500000		Actual expenditure (till...): 33573763.26		Total No. Of Students 332
Non Recurring	Recurring	Non Recurring	Recurring	Expenditure per student
2750000	37750000	2685388.88	30888374.38	101125.79

**Table 4 :: CFYm3 2015-2016**

Total Budget 33000000		Actual expenditure (till...): 30100682		Total No. Of Students 266
Non Recurring	Recurring	Non Recurring	Recurring	Expenditure per student
500000	32500000	35000	30065682	113160.46

Items	Budgeted in 2018-2019	Actual Expenses in 2018-2019 till	Budgeted in 2017-2018	Actual Expenses in 2017-2018 till	Budgeted in 2016-2017	Actual Expenses in 2016-2017 till	Budgeted in 2015-2016	Actual Expenses in 2015-2016 till
Laboratory equipment	1000000	4515085	2500000	2138098	2500000	2486940	500000	35000
Software	0	0	0	0	0	0	0	0
Laboratory consumable	0	0	0	0	250000	198449	0	0
Maintenance and spares	500000	117560	100000	55366	100000	1586	0	0
R & D	1000000	103253	500000	231147	500000	180415	0	0
Training and Travel	200000	43530	150000	59215	150000	7292	0	0
Miscellaneous Expenses*	4500000	2034091	3850000	3655337	3700000	3069908	3250000	3006568

<b>Total</b>	<b>56700000</b>	<b>25120344</b>	<b>41750000</b>	<b>39037196</b>	<b>40500000</b>	<b>33573764</b>	<b>33000000</b>	<b>30100682</b>
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**10.3.1 Adequacy of budget allocation (10)**

Institute Marks : 10.00

The allocated budget is sufficient to meet the financial need of the department. However due to decline in income from fee component in recent years, financial status is a bit strain

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**10.3.2 Utilization of allocated funds (20)**

Institute Marks : 20.00

The fund allocated in the budget has been generally utilized as per the budget provisions

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**10.4 Library and Internet (20)**

Total Marks 20.00

**10.4.1 Quality of learning resources (hard/soft) (10)**

Institute Marks : 10.00

Institute has a central library which has a rich collection of books/journals/periodicals etc. Details of the library are as under.

**v. Library space and ambience, timings and usage, availability of a qualified librarian and other staff, library automation, online access, networking, etc.**

- o Carpet area of library (in m): **495.89 Sqm. or 5330.8 Sqft.**
- o Reading space (in m): **154.49 Sqm. or 1663.86 Sqft.**
- o Number of seats in reading space: **65**
- o Number of Books Circulation per day: **165-200**
- o Number of users per day: **250-300**
- o Number of users (reading space) per day: **100-125**
- o Timings: During Working day: **09:00 AM to 8:00 PM**
- o Number of library staff: **11**
- o Number of library staff with degree in Library: **02**
- o Management Computerization:
  - For search: **YES**
  - Indexing: **YES**
  - Issue/return records Bar coding used: **YES**
- o Library services on Internet/Intranet:
  - **E-Books Access & Downloading Facility.**
  - **E-Journals Access & Downloading Facility.**
  - **NPTEL – Lecture Videos Access Facility**
  - **NPTEL – Courses Accessing Facility**
  - **OPAC (Online Public Access Catalogue)**
- o Consortium Membership:
  - **Shodh Sindhu, INFLIBNET, Gandhinagar**



- **N-List INFLIBNET, Gandhinagar**

- **Relevance of available learning resources including e-resources**

Year	Total No. of Books (Hard/Soft)	
	Hard Copy	Soft Copy (Subs. +Through N-List)
2019-20	75684	139683
2018-19	75684	80654
2017-18	74346	136054

Year	Total No. of Journals/Technical Magazines Subscribed (Hard/Soft)	
	Hard Copy	Soft Copy (Subs.+Through N-List)
2019-20	55	6490
2018-19	55	4665
2017-18	NIL	6472

- **Digital Library**

- **Separate Digital Library** accessible (24x7) over the Intranet/Internet
- **Membership:** of National Digital Library, IIT Kharagpur
- **Consortium Membership:**

- Shodh Sindhu, INFLIBNET, Gandhinagar
- N-List INFLIBNET, Gandhinagar

- Availability over Internet/Intranet:

- E-Books: **139683 Nos.**
- E-Journals: **6490Nos.**

- **Accessibility to Students**

- Open Access System for searching and selection of book(s) from library collection
- OPAC (Online Public Access Catalogue) through Library Automation Software 'Koha'
- Separate webpage of Central Library Accessible over the Intranet
- e-Books & e-Journals Access & Downloading Facility within the campus

- NPTEL – Lecture Videos Access & Downloading Facilities
- e-Resource access facility through ;
- e-Shodh Sindhu, INFLIBNET, Gandhinagar
- N-List, INFLIBNET, Gandhinagar
- National Digital Library, IIT Kharagpur
- Other Open Access e-Resources Access facility available on Internet

- **Supports to Students for Self Learning activities**

- Separate Reference Section
- Separate Reading Section
- e-Resources access points (Computers) for self learning
- Library e-Resources access facility within the Campus.
- Orientation Programmes for better utilization of library facilities
- Training Programmes for utilization of e-Resources

- **Utilization of Facilities**

- Number of Books Circulation per day: **150-200**
- Number of user per day: **75-100**
- Number of users (reading space) per day: **50-75**
- Number of users (e-Resources) per day: **50-75**

- **Effective Availability / Purchased Record**

- Print Books : (Annexure-01)
- E-Books : (Annexure -02 & 03))
- Print Journals : (Annexure -04)
- e- Journals : (Annexure -05 & 06)
- Turnitin Software : (Annexure - 07)

- \* Name of the internet provider : NKN (National Knowledge Network) ISP Railtel, JIO Net
- \* Available Bandwidth : 1 Gbps
- \*Wifi Availability : Yes, External WiFi Access points installed in the campus including Hostels, Main Building, Workshop. Departments.
- \*Internet Access in Labs classrooms, Library and offices of all departments : Yes, via Managed Network switches (L-2,L-3) connected to library, offices, labs thru fiber optic cable.
- \*Security Arrangement : for Internet security Cyberoam (300iNG) hardware firewall is installed in the campus

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**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)****Program should specify 2-4 program specific outcomes.**

PSO1	Apply the knowledge of engineering practices, science and mathematics to propose and apply effective engineering solutions.
PSO2	Identify suitable hardware/software part to implement algorithms/procedures hence analyze and make inferences from the output.

## 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 in force as on date and the institutes shall 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 will be 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. J S Chauhan

Designation : Director

Signature :



Seal of The Institution :



**Place :** Vidisha

**Date :** 14-01-2020 18:10:19