



ESTD : 2007

Sri Indu Institute of Engineering and Technology (Autonomous)

(Formerly RVR Institute of Engineering & Technology)

An Autonomous Institution Under UGC

NAAC Accredited. Recognized Under 2(f) of UGC Act 1956

EAMCET CODE: INDI

Approved by AICTE, New Delhi, & Affiliated to JNTUH, Hyderabad.

JNTUH CODE: X3



COURSE FILE

ON

ELEMENTS OF COMPUTER SCIENCE ENGINEERING

Course Code- **CS106ES**

I B. Tech Semester-I
A.Y. 2022-2023

Prepared by
Dr. I. SATYANARAYANA
Professor


Head of the Department
Department of H&S
SRI INDU INSTITUTE OF ENGG & TECH
Sheriguda(V), Ibrahimpatnam (M) R.R. Dist-501 510


PRINCIPAL
Sri Indu Institute of Engineering & Techno
Sheriguda(Vill), Ibrahimpatnam
R.R. Dist. Telangana-501 510.



ESTD : 2007



Sri Indu Institute of Engineering and Technology (Autonomous)

(Formerly RVR Institute of Engineering & Technology)

An Autonomous Institution Under UGC

NAAC Accredited. Recognized Under 2(f) of UGC Act 1956

EAMCET CODE: INDI

Approved by AICTE, New Delhi, & Affiliated to JNTUH, Hyderabad.

JNTUH CODE: X3

Academic Year	2022-2023
CourseTitle	ELEMENTS OF COMPUTER SCIENCE AND ENGINEERING
CourseCode	CS106ES
Programme	B. Tech
Year&Semester	I year I-semester
Branch& Section	CSE-C
Regulation	R22
Course Faculty	Dr.I Satyanarayana,Professor

Index of Course File

S. No.	Name of the content
1	Institute vision and mission
2	Department vision and mission/PEO
3	POs/PSOs
4	Course Syllabus with Structure
5	Course Outcomes (CO)
6	Mapping CO with PO/PSO; Course with PO/PSO with Justification
7	Academic Calendar
8	Timetable-highlighting course periods including tutorial
9	Lesson plan
10	Web references
11	Lecture notes
12	List of Power point presentations/Videos
13	Internal Question papers, Key with CO and BT
14	Mid answer scripts
15	Assignment Question papers mapped with CO and BT
16	Assignment script
17	Scheme of Evaluation
18	Result Analysis
19	CO,PO/PSO attainment sheets
20	Attendance register



ESTD : 2007

Sri Indu Institute of Engineering and Technology (Autonomous)

(Formerly RVR Institute of Engineering & Technology)

An Autonomous Institution Under UGC

NAAC Accredited. Recognized Under 2(f) of UGC Act 1956

EAMCET CODE: INDI

Approved by AICTE, New Delhi, & Affiliated to JNTUH, Hyderabad.

JNTUH CODE: X3



INSTITUTE VISION & MISSION

Vision:

To become a premier institute of academic excellence by providing the world class education that transforms individuals into high intellectuals, by evolving them as empathetic and responsible citizens through continuous improvement.

Mission:

- **IM1:** To offer outcome-based education and enhancement of technical and practical skills.
- **IM2:** To Continuous assess of teaching-learning process through institute-industry collaboration.
- **IM3:** To be a centre of excellence for innovative and emerging fields in technology development with state-of-art facilities to faculty and students' fraternity.
- **IM4:** To Create an enterprising environment to ensure culture, ethics and social responsibility among the stakeholders.


Head of the Department
Department of H&S
SRI INDU INSTITUTE OF ENGG & TECH
Sheriguda(VIII) Ibrahimpatnam (M) R.R. Dist-501 510


PRINCIPAL
Sri Indu Institute of Engineering & Tech.
Sheriguda(VIII), Ibrahimpatnam
R.R. Dist. Telangana-501 510.



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

DEPARTMENT VISION AND MISSION

Vision:

To become a prominent knowledge hub for learners, strive for educational excellence with innovative and industrial techniques so as to meet the global needs.

Mission:

- DM1 :** To provide ambience that enhances innovations, problem solving skills, leadership qualities, decision making, team-spirit and ethical responsibilities.
- DM2 :** To impart quality education with professional and personal ethics, so as to meet the challenging technological needs of the industry and society.
- DM3 :** To provide academic infrastructure and develop linkage with the worldclass organizations to strengthen industry-academia relationships for learners.
- DM4 :** To provide and strengthen new concepts of research in the thrust area of Computer Science and Engineering to reach the needs of Government and Society.

PRINCIPAL
Sri Indu Institute of Engineering & Tech.
Sheriguda(VIII), Ibrahimpatnam
R.R. Dist. Telangana-501 510.



SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY

(UGC AUTONOMOUS INSTITUTION)

Accredited by NAAC A+ Grade, Recognized under 2(f) of UGC Act 1956.

(Approved by AICTE, New Delhi and Affiliated to JNTUH, Hyderabad)

Khalsa Ibrahimpatnam, Sheriguda(V), Ibrahimpatnam(M), Ranga Reddy Dist., Telangana – 501510

PROGRAM OUTCOMES

- PO1. **ENGINEERING KNOWLEDGE:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
- PO2. **PROBLEM ANALYSIS:** Identify, formulate, research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
- PO3. **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.
- PO4. **CONDUCT INVESTIGATIONS OF COMPLEX PROBLEMS:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
- PO5. **MODERN TOOL USAGE:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.
- PO6. **THE ENGINEER AND SOCIETY:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
- PO7. **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.
- PO8. **ETHICS:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- PO9. **INDIVIDUAL AND TEAM WORK:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- PO10. **COMMUNICATION:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, give and receive clear instructions.
- PO11. **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.
- PO12. **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.


Head of the Department
Department of H&S
SRI INDU INSTITUTE OF ENGG & TECH
Sheriguda(V) Ibrahimpatnam (M) R.R. Dist-501510



Sri Indu Institute of Engineering & Technology

Recognized Under 2(f) of UGC Act 1956

Approved by AICTE, New Delhi

Affiliated to JNTUH, Hyderabad.

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

PROGRAM EDUCATIONAL OBJECTIVES

PEO1: To develop trained graduates with strong academic and technical skills of modern computer science and engineering.

PEO2: To promote trained graduates with leadership qualities and the ability to solve real time problems using current techniques and tools in interdisciplinary environment.

PEO3: To motivate the graduates towards lifelong learning through continuing education and professional development.

PROGRAM SPECIFIC OUTCOMES

PSO1: Professional Skills: To implement computer programs of varying complexity in the areas related to Web Design, Cloud Computing, Network Security and Artificial Intelligence.

PSO2: Problem-Solving Skills: To develop quality products using open ended programming environment.

PRINCIPAL
Sri Indu Institute of Engineering & Tech.
Sheriguda(VIII), Ibrahimpatnam
R.R. Dist. Telangana-501 510.

<https://siiet.ac.in>

SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY

B.Tech. in COMPUTER SCIENCE AND ENGINEERING COURSE STRUCTURE, I YEAR SYLLABUS (BR22 Regulations)

Applicable from Academic Year: 2022-23 Batch

I Year I Semester

S. No.	Course Code	Course Title	L	T	P	Credits
1.	MA101BS	Matrices and Calculus	3	1	0	4
2.	CH103BS	Engineering Chemistry	3	1	0	4
3.	CS103ES	Programming for Problem Solving	3	0	0	3
4.	EE101ES	Basic Electrical Engineering	2	0	0	2
5.	ME101ES	Computer Aided Engineering Graphics	1	0	4	3
6.	CS106ES	Elements of Computer Science & Engineering	0	0	2	1
7.	CH106BS	Engineering Chemistry Laboratory	0	0	2	1
8.	CS107ES	Programming for Problem Solving Laboratory	0	0	2	1
9.	EE102ES	Basic Electrical Engineering Laboratory	0	0	2	1
		Induction Program				
		Total	12	2	12	20

I Year II Semester

S. No.	Course Code	Course	L	T	P	Credits
1.	MA201BS	Ordinary Differential Equations and Vector Calculus	3	1	0	4
2.	AP202BS	Applied Physics	3	1	0	4
3.	ME202ES	Engineering Workshop	0	1	3	2.5
4.	EN204HS	English for Skill Enhancement	2	0	0	2
5.	EC201ES	Electronic Devices and Circuits	2	0	0	2
6.	AP205BS	Applied Physics Laboratory	0	0	3	1.5
7.	CS201ES	Python Programming Laboratory	0	1	2	2
8.	EN207HS	English Language and Communication Skills Laboratory	0	0	2	1
9.	CS203ES	IT Workshop	0	0	2	1
10.	*MC201ES	Environmental Science	3	0	0	0
		Total	13	4	12	20

ELEMENTS OF COMPUTER SCIENCE AND ENGINEERING
(Course Code: CS106ES)

B.Tech. I Year I Sem.

L T P C
0 0 2 1**Course Objective:** To provide an overview of the subjects of computer science and engineering.**Course Outcomes:**

1. Know the working principles of functional units of a basic Computer
2. Understand program development, the use of data structures and algorithms in problem solving.
3. Know the need and types of operating system, database systems.
4. Understand the significance of networks, internet, WWW and cyber security.
5. Understand Autonomous systems, the application of artificial intelligence.

UNIT – I**Basics of a Computer** – Hardware, Software, Generations of computers. Hardware - functional units, Components of CPU, Memory – hierarchy, types of memory, Input and output devices. Software – systems software, application software, packages, frameworks, IDEs.**UNIT – II****Software development** – waterfall model, Agile, Types of computer languages – Programming, markup, scripting Program Development – steps in program development, flowcharts, algorithms, data structures – definition, types of data structures**UNIT – III****Operating systems:** Functions of operating systems, types of operating systems, Device & Resource management**Database Management Systems:** Data models, RDBMS, SQL, Database Transactions, data centers, cloud services.**UNIT – IV****Computer Networks:** Advantages of computer networks, LAN, WAN, MAN, internet, WiFi, sensor networks, vehicular networks, 5G communication.

World Wide Web – Basics, role of HTML, CSS, XML, Tools for web designing, Social media, Online social networks.

Security – information security, cyber security, cyber laws

UNIT – V**Autonomous Systems:** IoT, Robotics, Drones, Artificial Intelligence – Learning, Game Development, natural language processing, image and video processing.

Cloud Basics.

TEXT BOOK:

1. Invitation to Computer Science, G. Michael Schneider, Macalester College, Judith L. Gersting University of Hawaii, Hilo, Contributing author: Keith Miller University of Illinois, Springfield.

REFERENCE BOOKS:

1. Fundamentals of Computers, Reema Thareja, Oxford Higher Education, Oxford University Press.
2. Introduction to computers, Peter Norton, 8th Edition, Tata McGraw Hill.
3. Computer Fundamentals, Anita Goel, Pearson Education India, 2010.
4. Elements of computer science, Cengage.



Course: Elements of Computer Science Engineering (C116)

Class: I B TECH- CSE

Course Outcomes

After completing this course, the student will be able to:

C116.1: Know the working principles of functional units of a basic Computer. (Knowledge)

C116.2: Understand program development, the use of data structures and algorithms in problem solving.
(Understanding)

C116.3: Know the need and types of operating system. (Knowledge)

C116.4: Know the need of database systems. (Knowledge)

C116.5: Understand the significance of networks, internet, WWW and cyber security. (Understanding)

C116.6: Understand Autonomous systems, the application of artificial intelligence.(Understanding)

**CO's Mapping with PO/PSO****Mapping of course outcomes with program outcomes:**

High -3 Medium -2 Low-1

PO/CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
C116.1	3	3	2	2	-	-	-	-	-	-	-	2	2	-
C116.2	2	3	3	-	-	-	-	-	-	-	-	2	-	-
C116.3	3	2	1	-	-	-	-	-	-	-	-	2	-	1
C116.4	3	-	2	-	2	-	-	-	-	-	-	2	-	-
C116.5	3	-	2	2	1	-	-	-	-	1	-	2	2	-
C116.6	2	-	1	-	3	-	-	-	-	1	-	1	2	-
C116	2.6	2.6	1.8	2	2	-	-	-	-	1	-	1.8	2	1



SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY

(UGC AUTONOMOUS INSTITUTION)

Accredited by NAAC A+ Grade, Recognized under 2(f) of UGC Act 1956.

(Approved by AICTE, New Delhi and Affiliated to JNTUH, Hyderabad)

Khalsa Ibrahimpatnam, Sheriguda(V), Ibrahimpatnam(M), Ranga Reddy Dist., Telangana – 501510

CO-PO mapping Justification

PO1. ENGINEERING KNOWLEDGE: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO2.PROBLEM ANALYSIS: Identify, formulate, research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

PO3.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.

PO4. CONDUCT INVESTIGATIONS OF COMPLEX PROBLEMS: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO5. MODERN TOOL USAGE: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.

PO10: 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, give and receive clear instructions.

PO12. 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.

PSO1: Professional Skills: To implement computer programs of varying complexity in the areas related to Web Design, Cloud Computing, Network Security and Artificial Intelligence.

PSO2: Problem-Solving Skills: To develop quality products using open ended programming environment.

C116.1: Know the working principles of functional units of a basic Computer. (Knowledge)

Justification	
PO1	Understanding the functional units (like CPU, memory, input/output devices) provides fundamental engineering knowledge. It forms the basis upon which more complex systems and concepts are built in computer science.
PO2	Knowledge of how functional units operate allows for better analysis of problems related to computer systems. Understanding these principles helps in identifying bottlenecks, performance issues, or potential failure points within a computer system.
PO3	To design efficient and effective computer systems, one needs to comprehend how the functional unit's work. This knowledge is crucial in developing solutions that are optimized for performance, reliability, and cost-effectiveness.
PO4	Complex computer-related issues often involve interactions between various functional units. Knowing how these units work helps in conducting thorough investigations into such problems.
PO12	Learning the principles of functional units in a basic computer is not just about the current technology but about understanding foundational concepts that evolve over time. It encourages a mindset of continual learning in a field where advancements happen rapidly.
PSO1	The understanding of functional unit's ties directly into the application of computing knowledge. Mathematics plays a significant role in understanding and optimizing these units, especially in areas like algorithm design, performance analysis, and system optimization.

C116.2: Understand program development ,the use of data structures and algorithms in problem solving.
(Understanding)

Justification	
PO1	Mastery in program development, data structures, and algorithms signifies a strong foundational engineering knowledge in computer science. This knowledge is pivotal in constructing reliable, efficient, and scalable software systems.
PO2	Proficiency in these areas enables students to analyze problems effectively. They can identify appropriate data structures and algorithms to tackle complex issues, optimizing solutions for various constraints like time and memory.
PO3	Knowing program development, data structures, and algorithms is crucial in designing effective solutions. It empowers students to craft software systems that are robust, maintainable, and perform ant.

PO12	These concepts go beyond current technologies; they form the basis for lifelong learning. As technologies evolve, the principles of data structures and algorithms remain constant, allowing for easier adaptation to new technologies and methodologies.
------	---

C116.3: Know the need and types of operating system. (Knowledge)

Justification	
PO1	Operating systems form the backbone of computer systems. Understanding their need and various types (like real-time OS, multi-user OS, distributed OS) is crucial foundational knowledge in computer engineering.
PO2	Operating systems are at the core of managing resources and providing an interface for user applications. Understanding them helps in analyzing problems related to resource management, performance issues, and system stability.
PO3	Knowledge about operating systems is essential for designing solutions that interact efficiently with system resources. It helps in developing applications that work seamlessly within different operating environments.
PO12	Operating systems continue to evolve with technological advancements. Understanding the need and types of operating systems cultivates a mindset of lifelong learning as students comprehend the underlying principles that transcend specific OS versions.
PSO2	Knowledge of operating systems contributes to understanding professional responsibilities, especially in ensuring system security, resource management, and ethical use of computing resources.

C116.4: Know the need of database systems. (Knowledge)

Justification	
PO1	Database systems are fundamental in modern computing. Understanding their need provides foundational knowledge in engineering, enabling students to comprehend the principles and technologies underlying data storage and retrieval.
PO3	Knowledge of database systems is essential for designing and developing solutions that involve efficient and organized data management. It enables the creation of robust, scalable, and secure software systems.
PO5	Database systems are a fundamental tool in today's technological landscape. Understanding their need and usage aligns with the utilization of modern tools and technologies in problem-solving and software development.

PO12	Databases evolve continually, adopting new models, technologies, and methodologies. Understanding the need for databases encourages a mindset of lifelong learning, allowing students to adapt to changing data management paradigms.
------	---

C116.5: Understand the significance of networks ,internet ,WWW and cyber security. (Understanding)

	Justification
PO1	Knowledge about networks, the internet, and cyber security is fundamental in computer engineering. It forms the basis for understanding how information is transmitted, stored, and secured in modern computing systems.
PO3	Understanding networks and cyber security is crucial for designing and developing solutions that are robust, scalable, and secure. It enables students to create software systems that effectively communicate over networks while considering security vulnerabilities.
PO4	Issues related to networks, internet protocols, and cyber security often involve intricate interactions. Proficiency in these areas allows students to investigate and troubleshoot complex problems effectively.
PO5	Networks, the internet, and cyber security tools are integral parts of modern computing. Understanding their significance aligns with the utilization of modern tools and technologies in problem-solving and software development.
PO10	In today's interconnected world, understanding networks and the internet aids in effective communication, not just between machines but also in explaining technical concepts to diverse audiences.
PO12	These domains are continuously evolving. Understanding networks, the internet, WWW, and cyber security instills a mindset of continuous learning as students must adapt to new protocols, threats, and technologies.
PSO1	Networking and cyber security involve mathematical concepts (like encryption algorithms) and application of computing knowledge to ensure secure communication and data transfer.

C116.6: Understand Autonomous systems, the application of artificial intelligence. (Understanding)

	Justification
PO1	Autonomous systems and AI represent cutting-edge technology. Understanding their principles provides foundational knowledge in engineering, enabling students to comprehend and work with advanced technologies shaping various industries.

PO3	Knowledge of autonomous systems and AI is essential for designing solutions that leverage these technologies effectively. It allows students to develop intelligent systems, automation techniques, and AI-driven applications.
PO5	AI and autonomous systems are integral modern tools used in various domains. Understanding their applications aligns with utilizing state-of-the-art tools and technologies in problem-solving and software development
PO10	AI and autonomous systems often involve complex concepts. Understanding these technologies enables students to effectively communicate technical concepts and their implications to diverse audiences.
PO12	AI and autonomous systems are rapidly evolving fields. Understanding their principles fosters a mindset of continuous learning as students adapt to advancements and new applications of AI in different domains.
PSO1	Understanding AI involves applying computational and mathematical concepts to develop algorithms, models, and systems that exhibit intelligent behavior.



SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY

UGC Autonomous Institution, Accredited by NAAC with A+ Grade

Recognized under 2(f) of UGC Act 1956.

(Approved by AICTE, New Delhi and Affiliated to JNTUH, Hyderabad)

Khalsa Ibrahimpatnam, Sheriguda(V), Ibrahimpatnam(M), Ranga Reddy Dist., Telangana – 501 510

<https://siiet.ac.in/>

Lr. No. SIET/BR22/Academic Calendar/2022/02

Date: 15.12.2022

REVISED ACADEMIC CALENDAR I.B.TECH FOR THE ACADEMIC YEAR 2022-23 (BR22-REGULATIONS)

Dr. I. Satyanarayana,
Principal.

X3

To,
All the HOD's
Sir,

Sub: SIET (Autonomous)-Academic & Evaluation-Revised Academic Calendar for I.B.Tech - I & II Semesters for the academic year 2022-2023-Reg.

The approved Academic Calendar for I.B.Tech – I & II Semesters for the academic year 2022-23 is given below.

I-SEMESTER

S. NO	Description	Period		Duration
		From	To	
1.	Commencement of I Semester class work (including Induction programme)	03.11.2022		
2.	1 st Spell of Instructions	03.11.2022	28.12.2022	8 Weeks
3.	I Mid Examinations	29.12.2022	04.01.2023	1 Week
4.	Submission of First Mid Term Exam Marks to the Autonomous Section on or before	10.01.2023		
5.	2 nd Spell of Instructions	05.01.2023	02.03.2023	8 Weeks
6.	Second Mid Term Examinations	03.03.2023	09.03.2023	1 Week
7.	Preparation & Practical Examinations	10.03.2023	16.03.2023	1 Week
8.	Submission of Second Mid Term Exam Marks to the Autonomous Section on or before	16.03.2023		
9.	I Semester End Examinations	17.03.2023	01.04.2023	2 Weeks

II-SEMESTER

S. NO	Description	Period		Duration
		From	To	
1.	Commencement of II Semester class work	03.04.2023		
2.	1 st Spell of Instructions (including Summer Vacation)	03.04.2023	10.06.2023	10 Weeks
	Summer Vacation	15.05.2023	27.05.2023	2 Weeks
3.	I Mid Examinations	12.06.2023	17.06.2023	1 Week
4.	Submission of First Mid Term Exam Marks to the Autonomous Section on or before	23.06.2023		
5.	2 nd Spell of Instructions	19.06.2023	12.08.2023	8 Weeks
6.	II Mid Term Examinations	14.08.2023	19.08.2023	1 Week
7.	Preparation & Practical Examinations	21.08.2023	26.08.2023	1 Week
8.	Submission of Second Mid Term Exam Marks to the Autonomous Section on or before	26.08.2023		
9.	II Semester End Examinations	28.08.2023	09.09.2023	2 Weeks
Commencement of Class Work for II B.Tech I Semester – 11.09.2023				

Principal
Sri Indu Institute of Engineering and Technology
(An Autonomous Institution Under JNTUH)
Copy to All the Heads of the Depts. & AO:
Sheriguda (V), Ibrahimpatnam, R.R. Dist-501510.

Principal
Sri Indu Institute of Engineering and Technology
(An Autonomous Institution Under JNTUH)
Sheriguda (V), Ibrahimpatnam, R.R. Dist-501510.

Principal
Sri Indu Institute of Engineering and Technology
(An Autonomous Institution Under JNTUH)
Sheriguda (V), Ibrahimpatnam, R.R. Dist-501510.



SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY

(An Autonomous Institution under UGC)

Accredited by NAAC with A+ Grade, Recognized under 2(f) of UGC Act 1956.

(Approved by AICTE, New Delhi and Affiliated to JNTUH, Hyderabad)

Khalsa Ibrahimpatnam, Sheriguda(V), Ibrahimpatnam(M), Ranga Reddy Dist., Telangana – 501 510

<https://siiet.ac.in/>

Class: CSE-C

Semester: I

W.E.F: 14-11-2022

LH: -D-109

	I 9:40- 10:30	II 10:30 - 11:20	III 11:20- 12:10	12:10- 12:45	IV 12.45- 1.35	V 1.35- 2.25	VI 2.25- 3.15	VII 3.15-4.00
MON	M&C	ECSE	BEE	L U N C II	PPS LAB			EG(T)
TUE	PPS	EC	ECSE		EG PRACTICE			LIB
WED	BEE/EC LAB				PPS	EC	M&C	PPS(T)/EC(T)
THU	EG PRACTICE				M&C	BEE	PPS	M&C(T)/BEE(T)
FRI	BEE	M&C	M&C		EC	PPS	BEE	BEE(T)/M&C(T)
SAT	BEE	EC	PPS		BEE/EC LAB			EC(T)/PPS(T)

Course Code	Course Name	Name of the Faculty	Course Code	Course Name	Name of the Faculty
MA101BS	Matrices and Calculus	T.THIRUPATHI REDDY	ME101ES	Computer Aided Engineering Graphics	M.YADAGIRI
CH103BS	Engineering Chemistry	K.MOUNIKA	CH106BS	Engineering Chemistry Lab	V.MOUNIKA/K.MOUNIKA
CS103ES	Programming for Problem Solving	B.RAJASHWARI	CS107ES	Programming for Problem Solving Lab	B.RAJASHWARI/ D.SWAPNA
EE101ES	Basic Electrical Engineering	MP.REENA	EE102ES	Basic Electrical Engineering Lab	MP.REENA/ K.RAJASHEKAR
CS106ES	Elements of Computer Science & Engineering	Dr.I.SATYANARAYANA			

Thy
Class In-Charge

Ch. Saritha
Time Table Coordinator

[Signature]
Head of The Department



Dr. R. YADAGIRI RAO
M.Sc., B.Ed., M.Tech(CSE), Ph.D
Head of the Department
Department of H&S
SRI INDU INSTITUTE OF ENGG & TECH
Sheriguda(V) Ibrahimpatnam (M) Ranga Reddy Dist. - 501 510



DEPARTMENT OF HUMANITIES AND SCIENCES

COURSE TITLE	ELEMENTS OF COMPUTER SCIENCE ENGINEERING
COURSE CODE	CS106ES
PROGRAMME	B. TECH
YEAR & SEMESTER	I-YEAR,I-SEMESTER
REGULATION	R22
COURSE FACULTY	Dr I.SATYANARAYANA, PROFESSOR
SUBJECT	LESSON PLAN

ELEMENTS OF COMPUTER SCIENCE ENGINEERING LESSON PLAN

UNIT-1: BASICS OF COMPUTER

S.NO	TOPIC TO BE COVERED	TEACHING AIDS	BOOKS
1	Hardware, Software	BB	T1,R1
2	Generations of computers.	BB	T1, R1
3	Hardware - functional units ,Components of CPU.	BB	T1, R1
4	Memory – hierarchy, types of memory.	BB	T1, R1
5	Input and output devices. .	BB	T1, R1
6	Software –systems software, application software.	BB	T1, R1
7	Packages, frameworks, IDEs	BB	T1, R1

UNIT-II: SOFTWARE DEVELOPMENT

S.NO	TOPIC TO BE COVERED	TEACHING AIDS	BOOKS
1	Waterfall Model, Agile	BB	T1, R1
2	Types Of Computer Languages – Programming ,Markup ,Scripting	BB	T1, R1
3	Program Development–Steps in Program Development.	BB	T1, R1
4	Flowcharts, Algorithms.	BB	T1, R1
5	Data Structures– Definition ,Types of Data Structures	BB	T1, R1

UNIT-III OPERATING SYSTEMS, DATABASE MANAGEMENT SYSTEMS

S.NO	TOPIC TO BE COVERED	TEACHING AIDS	BOOKS
1	Functions Of Operating Systems, Types of Operating Systems	BB	T1, R1
2	Data Models ,RDBMS	BB	T1, R1
3	SQL	BB	T1, R1
4	Database Transactions	BB	T1, R1
5	Data Centers ,Cloud Services	BB	T1, R1

UNIT-IV COMPUTER NETWORKS, WORLD WIDE WEB, SECURITY

S.NO	TOPIC TO BE COVERED	TEACHING AIDS	BOOKS
1	Advantages of computer networks ,LAN, WAN ,MAN ,internet, WIFI	BB	T1, R1
2	Sensor networks ,vehicular networks ,5G - communication.	BB	T1, R1
3	Sensor networks ,vehicular networks ,5G - communication.	BB	T1, R1
4	World Wide Web–Basics ,role of HTML	BB	T1, R2
5	CSS ,XML ,Tools for web designing.	BB	T1, R2
6	Social media ,online social networks.	BB	T1, R2
7	Security–information security ,cyber security	BB	T1, R2
8	Cyber laws	BB	T1, R2
9	Sensor networks ,vehicular networks ,5G - communication.	BB	T1, R2

UNIT –V: AUTONOMOUS SYSTEMS

S.NO	TOPIC TO BE COVERED	TEACHING AIDS	BOOKS
1	Iot ,Robotics ,Drones	BB	T1,R2
2	Artificial Intelligence–Learning.	BB	T1,R2
3	Game Development ,Natural Language Processing	BB	T1,R2
4	Image And Video Processing	BB	T1,R2



SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY

(UGC AUTONOMOUS INSTITUTION)

Accredited by NAAC A+ Grade, Recognized under 2(f) of UGC Act 1956.

(Approved by AICTE, New Delhi and Affiliated to JNTUH, Hyderabad)

Khalsa Ibrahimpatnam, Sheriguda(V), Ibrahimpatnam(M), Ranga Reddy Dist., Telangana-501510

WEB REFERENCES :

S.NO	Link
1	https://www.tutorialspoint.com/basics_of_computers/basics_of_computers_introduction.htm
2	https://www.geeksforgeeks.org/basics-of-computer-and-its-operations/
3	https://www.geeksforgeeks.org/top-5-sdlcsoftware-development-life-cycle-methodologies/?ref=lbp
4	https://www.coursera.org/articles/types-programming-language
5	https://www.geeksforgeeks.org/data-structures/
6	https://www.geeksforgeeks.org/what-is-an-operating-system/
7	https://www.geeksforgeeks.org/introduction-of-dbms-database-management-system-set-1/
8	https://www.geeksforgeeks.org/basics-computer-networking/
9	https://www.geeksforgeeks.org/world-wide-web-www/
10	https://www.creativebloq.com/features/best-web-design-tools
11	https://www.ibm.com/topics/cybersecurity
12	https://www.geeksforgeeks.org/introduction-to-internet-of-things-iot-set-1/

VIDEO REFERENCES :

S.NO	Link
1	https://youtu.be/v2kg3MOK1sY?si=FZzhNLnt9tGNziA9
2	https://youtu.be/BTB86HeZVwk?si=GDrBkZu_1JP7lvhz
3	https://youtu.be/ZniDyolzrBw?si=ykcIA1ZJkF2pUcI9
4	https://youtu.be/4Cr0OxXU7jY?si=cqti5UmRGgNGBjf2
5	https://youtu.be/aYiGXzktatA?si=9qINvZ_M50_ZiHO
6	https://youtu.be/vBURTt97EkA?si=ygurenlcKc7gL_OM
7	https://youtu.be/6lu45VZGODk?si=40_LcD54.IojEAons
8	https://youtu.be/J8hzJxb0rpc?si=PAElJfnMJwlgJfuG
9	https://youtu.be/inWWhr5tnEA?si=N5vXILinUqTNB4b3
10	https://youtu.be/6mBO2vqLv38?si=WdlGeWNng340s-cp
11	https://youtu.be/oV74Najm6Nc?si=DbA62a2ScbtrV0aE
12	https://youtu.be/olFwW7kdtP8?si=JNANUrAzezpHfYGH
13	https://youtu.be/XZmGGAbHqa0?si=kmdaX7SFhwfadL_W



SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY

(UGC AUTONOMOUS INSTITUTION)

Accredited by NAAC A+ Grade, Recognized under 2(f) of UGC Act 1956.

(Approved by AICTE, New Delhi and Affiliated to JNTUH, Hyderabad) Khalsa
Ibrahimpattam, Sheriguda(V), Ibrahimpattam(M), Ranga Reddy Dist., Telangana 501510

LECTURE NOTES

Unit 1 link:

https://drive.google.com/file/d/1chcPf49xNxjQphuV2829EACTj_MyHXpJ/view?usp=sharing

Unit 2 link:

https://drive.google.com/file/d/1eZzcomIFtoUX8_-DcB2PbptbXSzBfqwR/view?usp=sharing

Unit 3 link:

<https://drive.google.com/file/d/1qt9zAuTXssuhePKZAgg4-okMLIt0FKOS/view?usp=sharing>

Unit 4 link:

<https://drive.google.com/file/d/1hroRYJf1HZkdNRiKpwYKdl3u5tU3S92E/view?usp=sharing>

Unit 5 link:

https://drive.google.com/file/d/1VpdSMPTg11wh_SLi41T-zuMsHeeLn5yx/view?usp=sharing



POWERPOINT PRESENTATION

Unit-1

<https://drive.google.com/file/d/1VOFTiJnMr9V3ncQ8lQzpfILr85bQ2eBx/view?usp=sharing>

Unit-2

https://drive.google.com/file/d/1AeQSYodNU-fi2zFC9_pp1oc06L71FmRm/view?usp=sharing

Unit-3

<https://drive.google.com/file/d/16Fv-BkkNA2YXk9EImCCmEkIR7qADLhRL/view?usp=sharing>

https://drive.google.com/file/d/1Z6_TujmalORG4MbzW_WWjluQfPOL0vu/view?usp=sharing

Unit-4

https://drive.google.com/file/d/1Mxdxi365eQoSy6MRkvrR7-663GdCi7_1/view?usp=sharing

Unit-5

<https://drive.google.com/file/d/1zzOEj-qsNgqybbTCMBmILpp8CpsBhwqZ/view?usp=sharing>

SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY



UGC Autonomous Institution, Accredited by NAAC with A+ Grade

Recognized under 2(f) of UGC Act 1956.

(Approved by AICTE, New Delhi and Affiliated to JNTUH, Hyderabad)

Sheriguda(V), Ibrahimpatnam(M), R.R Dist., Telangana – 501 510 I

B.Tech I-Mid Examinations, Dec-2022/Jan-2023

X3

BR22

Set-I

Branch: CSE,CSE(CS),CSE(AI&ML),CSE(DS),CSE(IOT),AI&DS

Date:03-01-2023

Subject: Elements Of Computer Science &Engineering

Marks:40

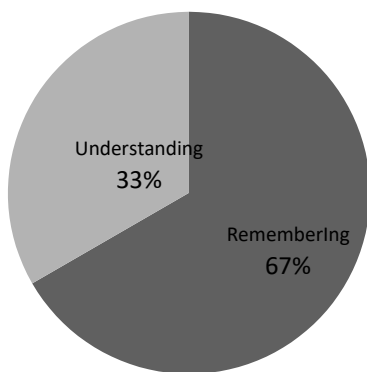
Time: 2 Hours

Answer Any FOUR Questions, Each Question Carry equal Marks

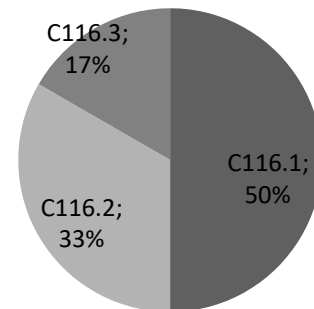
4*10=40marks

1. Define the following a)Software b)Hardware c)Mother board d)CPU e) Memory (C116.1) (rememberingL1)
2. Define memory? write different types of memory? (C116.1) (rememberingL1)
3. Define the following a)frame work b)IDEs c) packages (C116.1) (rememberingL1)
4. Explain water fall model with phases? (C116.2) (understanding L2)
5. Describe flow chart with symbols? explain with examples? (C116.2) (understanding L2)
6. Write the functions of operating system? (C116.3) (remembering L3)

QUESTION PAPER MAPPING WITH BT



Question Paper Mapping with CO's





SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY

(UGC AUTONOMOUS INSTITUTION)

Accredited by NAAC A+ Grade, Recognized under 2(f) of UGC Act 1956.

(Approved by AICTE, New Delhi and Affiliated to JNTUH, Hyderabad)

Khalsa Ibrahimpatnam, Sheriguda(V), Ibrahimpatnam(M), Ranga Reddy Dist., Telangana – 501510

Answer key:-

Descriptive paper key link:

<https://drive.google.com/file/d/1ZRztmatEukK5tbvve25YPc2ROtuursSi/view?usp=drivesdk>



SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY

UGC Autonomous Institution, Accredited by NAAC with A+ Grade

Recognized under 2(f) of UGC Act 1956.

(Approved by AICTE, New Delhi and Affiliated to JNTUH, Hyderabad)

Sheriguda(V), Ibrahimpatnam(M), R.R Dist., Telangana – 501 510

I B.Tech II-Mid Examinations, March-2023

X3

BR22

Set-I

Branch: CSE,CSE(CS),CSE(AI&ML),CSE(DS),CSE(IOT)& AI&DS

Date:09-03-2023(FN)

Subject: Elements Of Computer Science &Engineering

Marks:20

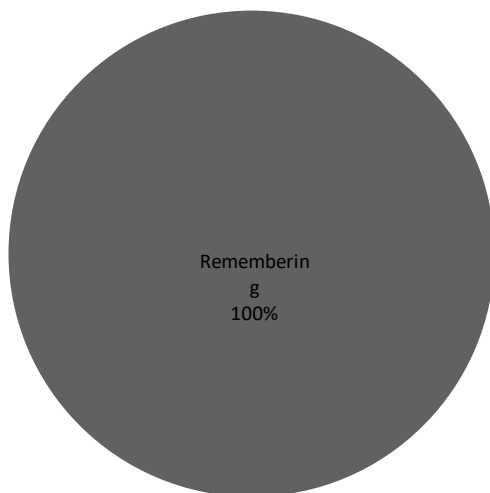
Time: 2 Hours

Answer Any **FOUR** Questions, Each Question Carry equal Marks

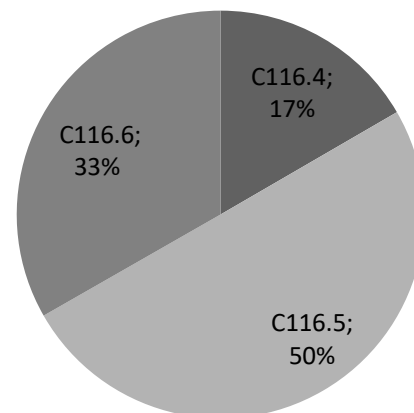
4*10=40 marks

1. Define Data Model?list different types of data models? (C116.4) (remembering)
2. Define the following a) LAN b) MAN c) WAN d) WiFi e) 5G technology? (C116.5) (remembering)
3. Define computer network? List different types of components in computer network?(C116.5) (remembering)
4. What is cybercrime? Tell different types of crimes. (C116.5) (remembering)
5. What is AI? List applications of AI? (C116.6) (remembering)
6. Name internet of things devices with neat diagram and explain how it works? (C116.6) (remembering)

QUESTION PAPER MAPPING WITH BT



Question Paper Mapping with CO's





SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY

UGC Autonomous Institution, Accredited by NAAC with A+ Grade

Recognized under 2(f) of UGC Act 1956.

(Approved by AICTE, New Delhi and Affiliated to JNTUH, Hyderabad)

Sheriguda(V), Ibrahimpatnam(M), R.R Dist., Telangana - 501 510

I B.Tech II - Mid Examinations, March-2023

X3

BR22

Branch: CSE, CSE(CS), CSE (AI&ML), CSE(DS), CSE (IOT)& AI&DS

Date: 09-03-2023 (FN)

Subject: Elements of Computer Science & Engineering

Marks: 20

Student Name: H.T.No.:

--	--	--	--	--	--	--	--	--	--

Part-A

Objective/Quiz Paper

The objective/quiz paper is set with multiple choice, fill-in the blanks and match the following type of questions for a total of 20 marks.

Multiple choices:

1. What is a database? []
 - a) Organized collection of information that cannot be accessed, updated, and managed
 - b) Collection of data or information without organizing
 - c) Organized collection of data or information that can be accessed, updated, and managed
 - d) Organized collection of data that cannot be updated
2. What does an RDBMS consist of? []
 - a) Collection of Records
 - b) Collection of Keys
 - c) Collection of Tables
 - d) Collection of Fields
3. The first Network was called _____ []
 - a) CNET
 - b) NSFNET
 - c) ASAPNET
 - d) ARPANET
4. Which network topology requires a central controller or hub? []
 - a) Star
 - b) Mesh
 - c) Ring
 - d) Bus
5. Data communication system within a building or campus is _____ []
 - a) LAN
 - b) WAN
 - c) MAN
 - d) PAN9.
6. Which of the following is not a fundamental component of an IoT system? []
 - a) Sensors
 - b) Connectivity and data processing
 - c) User interface
 - d) Transformer
7. What is Artificial Intelligence? []
 - a) Artificial Intelligence is a field that aims to make humans more intelligent
 - b) Artificial Intelligence is a field that aims to improve the security
 - c) Artificial Intelligence is a field that aims to develop intelligent machines
 - d) Artificial Intelligence is a field that aims to mine the data
8. NLP is concerned with the interactions between computers and human (natural) languages. []
 - a) True
 - b) False

Fill in the blanks:

9. The _____ data center is a solution to the latency problem
10. SQL stands for _____.
11. _____ is an example of social network
12. A mechanism used to encrypt and decrypt data is called _____.
13. _____ is the channel through which data travels from one device to another on a network.
14. _____ is used to capture data from the physical world in IoT devices.
15. _____ process helps in image enhancement.
16. The quadcopter has _____ motors on a symmetrical frame

Match the following:

17.
 - i. HTML () a. active attack
 - ii. Traffic analysis () b. web designing tool
 - iii. Masquerade () c. <h3>
 - iv. Heading () d. passive attack

18.
 - i. Smart city () a. learning algorithm
 - ii. Aerial photography () b. subset of AI
 - iii. Random forest () c. drone
 - iv. Machine learning () d. IoT application



Answer key

Descriptive paper key link

<https://drive.google.com/file/d/13HZ1bqb7EpNKLQjTnj3az8BxwBq0AAqx/view?usp=sharing>

Objective/Quiz Key Paper

Multiple Choice Questions

1. c
2. c
3. d
4. a
5. a
6. d
7. c
8. a

Fill in the blanks

9. Edge
10. Structured Query Language
11. Facebook or Instagram
12. Cryptography
13. Transmission Medium
14. Sensor
15. Image Processing
16. 4

Match the following

- | | | |
|-----|--------|----------|
| 17. | i) b | 18. i) d |
| | ii) d | ii) c |
| | iii) a | iii) a |
| | iv) c | iv) b |



SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY
(UGC AUTONOMOUS INSTITUTION)

Accredited by NAAC A+ Grade, Recognized under 2(f) of UGC Act 1956.

(Approved by AICTE, New Delhi and Affiliated to JNTUH, Hyderabad)

Khalsa Ibrahimpatnam, Sheriguda(V), Ibrahimpatnam(M), Ranga Reddy Dist., Telangana – 501510

Answer Scripts:

Mid 1 Answer Script Link:

https://drive.google.com/file/d/164X5HfUKGC3-1Nfr9eatD0mM8VP0-6ok/view?usp=drive_link

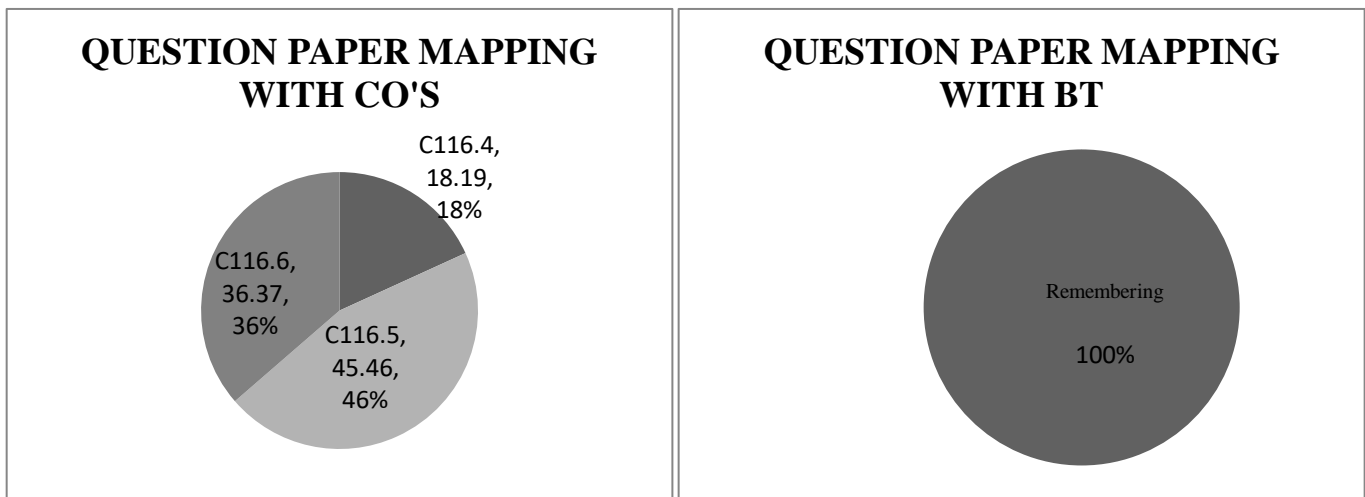
Mid 2 Answer Script Link:

https://drive.google.com/file/d/1juUq_er4RI_8ThrxCz9XnpouENCf54Ky/view?usp=sharing



ECSE ASSIGNMENT QUESTIONS MAPPED WITH CO AND BT (MID-II)

1. Define data model? List different types of data models? (C116.4) (Remembering)
2. What is SQL? List different types of SQL? (C116.4) (Remembering)
3. Define the following a) LAN b) MAN c) WAN d) Wi Fi e)5G technology (C116.5) (Remembering)
4. Define computer network? List different types of components in computer network? (C116.5) (Remembering)
5. Define security? What are the goals of security and types of security attacks? (C116.5) (Remembering)
6. What is cybercrime? Tell different types of crimes? (C116.5) (Remembering)
7. Define html,CSS, xml? Explain different types of CSS? Tell any 10 tags in html with example? (C116.5) (Remembering)
8. What is ML? Explain different types of learning algorithms in detail? (C116.6) (Remembering)
9. What is AI? List applications of AI? (C116.6) (Remembering)
10. What is Drone Architecture and their types? list different applications of Drone? (C116.6) (Remembering)
11. Name internet of things devices with neat diagram and explain how it works? (C116.6) (Remembering)



SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY

(UGC AUTONOMOUS INSTITUTION)

Accredited by NAAC A+ Grade, Recognized under 2(f) of UGC Act 1956.

(Approved by AICTE, New Delhi and Affiliated to JNTUH, Hyderabad)

Khalsa Ibrahimpatnam, Sheriguda(V), Ibrahimpatnam(M), Ranga Reddy Dist., Telangana – 501510

Mid 2 Assignment Link:

https://drive.google.com/file/d/1Mbs34z9NXWsiPP8WgSAiDzTtix_Fa1q5/view?usp=sharing



SCHEME OF EVALUATION

MID-1

S.N O	DESCRIPTION	MARKS	BLOOMS TAXONOMY	CO
1	Definitions for a)Software	2	Remembering(L1)	C116.1
	b)Hardware	2	Remembering(L1)	C116.1
	c)Motherboard	2	Remembering(L1)	C116.1
	d)CPU	2	Remembering(L1)	C116.1
	e)Memory	2	Remembering(L1)	C116.1
2	Definition of memory	2	Remembering(L1)	C116.1
	a)Main memory	4	Remembering(L1)	C116.1
	b)Second memory	4	Remembering(L1)	C116.1
3	Description of a) Framework	4	Remembering(L1)	C116.1
	b) IDE	3	Remembering(L1)	C116.1
	c) Packages	3	Remembering(L1)	C116.1
4	Waterfall model diagram	4	Understanding(L2)	C116.2
	Explanation of Waterfall model with phases	6	Understanding(L2)	C116.2
5	Describing Flowchart with symbols	5	Understanding(L2)	C116.2
	Flowchart with example	5	Understanding(L2)	C116.2
6	Functions of operating system	10	Remembering(L1)	C116.3



SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY

(UGC AUTONOMOUS INSTITUTION)

Accredited by NAAC A+ Grade, Recognized under 2(f) of UGC Act 1956.

(Approved by AICTE, New Delhi and Affiliated to JNTUH, Hyderabad)

Khalsa Ibrahimpatnam, Sheriguda(V), Ibrahimpatnam(M), Ranga Reddy Dist., Telangana – 501510

SCHEME OF EVALUATION

MID-2

S.NO	DESCRIPTION	MARKS	BLOOMS TAXONOMY	CO
1	Definition of Data model	1	Remembering(L1)	C116.4
	List of different data models and their explanation	4	Remembering(L1)	C116.4
2	Definition of a) LAN	1	Remembering(L1)	C116.5
	b) MAN	1	Remembering(L1)	C116.5
	c) WAN	1	Remembering(L1)	C116.5
	d)WIFI	1	Remembering(L1)	C116.5
	e)5G Technology	1	Remembering(L1)	C116.5
3	Definition of Computer network	1	Remembering(L1)	C116.5
	Different types of components in computer network	4	Remembering(L1)	C116.5
4	Explanation of cyber crime	2	Remembering(L1)	C116.5
	Types of cyber crimes	3	Remembering(L1)	C116.5
5	Explanation of AI	2	Remembering(L1)	C116.6
	Applications of AI	3	Remembering(L1)	C116.6
6	Internet of things device names	2	Remembering(L1)	C116.6
	Explanation of IoT working process	3	Remembering(L1)	C116.6



RESULT ANALYSIS

Branch : CSE-C

Subject: Elements Of Computer Science &Engineering

List Of Slow Learners

S.N O	ROLL NO	Intermediate Marks	MID1 MARKS	MID2 MARKS
1	22X31A05D1	748	29	40
2	22X31A05D2	760	38	43
3	22X31A05D3	777	27	30
4	22X31A05D4	606	34	42
5	22X31A05F7	600	37	35
6	22X31A05F8	630	38	44
7	22X31A05F9	612	36	32
8	22X31A05H3	450	32	39
9	22X31A05I4	612	31	32
10	22X31A05I7	730	31	37

List Of Advance Learners

S No	Roll No	Intermediate Marks
1	22X31A05D5	967
2	22X31A05E8	956
3	22X31A05F5	980
4	22X31A05G0	947
5	22X31A05G1	956
6	22X31A05G4	967
7	22X31A05G7	949
8	22X31A05G8	953
9	22X31A05J0	960
10	22X31A05J1	962



SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY

Department of Humanities & Sciences

Course Outcome Attainment (Internal Examination-1)

Name of the faculty: Dr. I. SATYANARAYANA Academic Year: 2022-2023

Branch & Section: CSE -C Examination: I Internal

Course Name: ELEMENTS OF
COMPUTER Year: I Semester: I
SCIENCE
&ENGINEERING

S.No	HT No.	Q1a	Q1b	Q2a	Q2b	Q3a	Q3b	Q4a	Q4b	Q5a	Q5b	Q6a	Q6b	VIVA
Max. Marks ==		10		10		10		10		10		10		10
1	22X31A05D1	10						4		5				10
2	22X31A05D2	8		7		7		6						10
3	22X31A05D3	5		4						8				10
4	22X31A05D4	6		4		8				6				10
5	22X31A05D5	10						4		10		6		10
6	22X31A05D6	10		5						10		3		10
7	22X31A05D7	10		9		3				6				10
8	22X31A05D8	9		8				6		8				10
9	22X31A05D9	10		7				9		8				10
10	22X31A05E0	9		9						8		9		10
11	22X31A05E1	10		10				8		8				10
12	22X31A05E2	10				6		5		8				10
13	22X31A05E3	7		2						7		5		10
14	22X31A05E4	8								5				10
15	22X31A05E5	9		10		9				9				10
16	22X31A05E6	10		8						9				10
17	22X31A05E7	6		8				8		6				10
18	22X31A05E8	10		10		5								10
19	22X31A05E9	10		8		9				9				10
20	22X31A05F0	7				8		5		9				10
21	22X31A05F1	10		10						10		8		10
22	22X31A05F2	10		10				8		10				10
23	22X31A05F3	8		6								6		10
24	22X31A05F4	A		A		A		A		A		A		A
25	22X31A05F5	10		10				5		10				10
26	22X31A05F6	10		10				5		10				10
27	22X31A05F7	10		9						8				10
28	22X31A05F8	8		7				5		8				10
29	22X31A05F9	8						5		8		5		10
30	22X31A05G0	10		9				9		10				10
31	22X31A05G1	10		8		10				9				10
32	22X31A05G2	8		7		5				9				10
33	22X31A05G3	6		6						7		7		10
34	22X31A05G4	10		8		10		10						10
35	22X31A05G5	9		5				5		8				10
36	22X31A05G6	A		A		A		A		A		A		A
37	22X31A05G7	10						8		5		8		10
38	22X31A05G8	9		9		9				10				10
39	22X31A05G9	8		8				5		8				10
40	22X31A05H0	10		10						8		6		10
41	22X31A05H1	7		10				5		7				10

CO	Subj	obj	Asgn	Overall	Level
CO-1	90%		97%	93%	3.00
CO-2	75%		97%	86%	3.00
CO-3	75%		97%	86%	3.00
CO-4					
CO-5					
CO-6					

Attainment (Internal 1 Examination) = **3.00**

Attainment Level	
1	40%
2	50%
3	60%

43	22X31A05H3			4		4		4		2			15	5	5	
44	22X31A05H4	3		5		2							18	5	5	
45	22X31A05H5	2		4		1				2			16	5	5	
46	22X31A05H6	5		5		2		3					17	5	5	
47	22X31A05H7	5		5		5							19	5	5	
48	22X31A05H8	3		5				3		3			15	5	5	
49	22X31A05H9			4				4					16	5	5	
50	22X31A05I0			5		2					1		16	5	5	
51	22X31A05I1	5		5									15	5	5	
52	22X31A05I2	1		4		1		2					15	5	5	
53	22X31A05I3	5		5		2		2					15	5	5	
54	22X31A05I4	3				2		1					16	5	5	
55	22X31A05I5			5				1		2			15	5	5	
56	22X31A05I6	A		A		A		A		A			A	5	5	
57	22X31A05I7			5		2				2			18	5	5	
58	22X31A05I8	5		5		5				4			19	5	5	
59	22X31A05I9	1											18	5	5	
60	22X31A05I0	4		5									20	5	5	
61	22X31A05J1			5		5		5		5			19	5	5	
Target set by the faculty / HoD		3.00	0.00	3.00	###	3.00	0.00	3.00	0.00	3.00	###	###	0.00	12.00	3.00	3.00
Number of students performed above the target		29	0	49	0	20	0	20	0	12	0	2	0	54	59	59
Number of students attempted		41	0	55	0	43	0	37	0	32	0	8	0	61	61	61
Percentage of students scored more than target		71%		89%		47%		54%		38%		###		89%	100%	97%

CO Mapping with Exam Questions:

CO - 1																
CO - 2																
CO - 3	Y												Y	Y	Y	
CO - 4					Y								Y	Y	Y	
CO - 5								Y		Y			Y	Y	Y	
CO - 6			Y									Y		Y	Y	Y

% Students Scored >Target %	71%		89%		47%		54%		38%		###		89%	100%	97%
-----------------------------	-----	--	-----	--	-----	--	-----	--	-----	--	-----	--	-----	------	-----

CO Attainment based on Exam Questions:

CO - 1																
CO - 2																
CO - 3	71%												89%	100%	100%	
CO - 4					71%								89%	100%	100%	
CO - 5							71%		71%				89%	100%	100%	
CO - 6			71%									###		89%	100%	97%

CO	Subj	obj	ppt	Overall	Level
CO-1					

Attainment Level	
1	40%

CO-2					
CO-3	71%	89%	100%	86%	3.00
CO-4	71%	89%	100%	86%	3.00
CO-5	71%	89%	100%	86%	3.00
CO-6	71%	89%	97%	85%	3.00

Attainment (Internal Examination-2) =

3.00

2	50%
3	60%

Attainment level	#####
------------------	-------

SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY

Department of Humanities & Sciences

Course Outcome Attainment



Name of the faculty : Dr. I. SATYANARAYANA

Academic Year: 2022-2023

Branch & Section: CSE -C

Examination: I Internal

Course Name: ELEMENTS OF COMPUTER
SCIENCE &ENGINEERING

Year: I

Semester: I

Course Outcomes	1st Internal Exam	2nd Internal Exam	Internal Exam	University Exam	Attainment Level
CO1	3.00		3.00		3.00
CO2	3.00		3.00		3.00
CO3	3.00	3.00	3.00		3.00
CO4		3.00	3.00		3.00
CO5		3.00	3.00		3.00
CO6		3.00	3.00		3.00
Internal & University Attainment:			3.00		
Weightage			100%		
CO Attainment for the course (Internal, University)			3.00		
CO Attainment for the course (Direct Method)			3.00		

Overall course attainment level

3.00



SRI INDU INSTITUTE OF ENGINEERING & TECHNOLOGY

Department of Humanities & Sciences

Program Outcome Attainment (from Course)

Name of Faculty: Dr. I. SATYANARAYANA Academic Year: 2022-2023

Branch & Section: CSE-C Year: I

Course Name: ELEMENTS OF COMPUTER SCIENCE & ENGINEERING Semester: I

CO-PO mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	3	3	2	2	-	-	-	-	-	-	-	2	2	-
CO2	2	3	3	-	-	-	-	-	-	-	-	2	-	-
CO3	3	2	1	-	-	-	-	-	-	-	-	2	-	1
CO4	3	-	2	-	2	-	-	-	-	-	-	2	-	-
CO5	3	-	2	2	1	-	-	-	-	1	-	2	2	-
CO6	2	-	1	-	3	-	-	-	-	1	-	1	2	-
Course	2.67	2.67								1.00		1.83	2	1

CO	Course Outcome Attainment
CO1	3.00
CO2	3.00
CO3	3.00
CO4	3.00
CO5	3.00
CO6	3.00
Overall course attainment level	3.00

PO-ATTAINMENT

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO Attainment	2.67	2.67								1.00		1.83	2	1

CO contribution to PO - 33%, 67%, 100% (Level 1/2/3)

SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY

(UGC AUTONOMOUS INSTITUTION)



Accredited by NAAC A+ Grade, Recognized under 2(f) of UGC Act 1956.

(Approved by AICTE, New Delhi and Affiliated to JNTUH, Hyderabad)

Khalsa Ibrahimpatnam, Sheriguda(V), Ibrahimpatnam(M), Ranga Reddy Dist., Telangana – 501510

REGISTER

Class Register Link:

<https://drive.google.com/file/d/1L418kchwnkO0a3MVuee66XQ3kuRYJFaa/view?usp=sharing>