SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)
MCA I Year II Semester Regular & Supplementary Examinations August-2024
COMPUTER NETWORKS

Time: 3 Hours　　　　　　　　　　　　　　　　　　　　　　**Max. Marks: 60**

(Answer all Five Units **5 x 12 = 60** Marks)

UNIT-I

1	a	Explain detail about Network Hardware.	CO2	L2	6M
	b	How network hardware supports the communication of two systems?	CO2	L2	6M

OR

2	Describe the working principle of Carrier sense multiple access with collision detection (CSMA/CD).	CO5	L2	12M

UNIT-II

3	Explain detailed about Flooding & Broadcast Routing Algorithms.	CO1	L2	12M

OR

4	a	Determine the term choke packet.	CO1	L5	6M
	b	Describe the involvement of choke packets in congestion control.	CO2	L2	6M

UNIT-III

5	a	Explain the detailed about types of Fragmentation.	CO1	L1	6M
	b	Discuss about multicasting techniques & protocols.	CO3	L6	6M

OR

6	What is ATM? Describe detail about ATM.	CO1	L1	12M

UNIT-IV

7	a	What are the functions of transport layer?	CO3	L1	6M
	b	State transport service primitives.	CO3	L1	6M

OR

8	How does UDP differ from TCP? List the applications of UDP.	CO1	L1	12M

UNIT-V

9	Explain details about HTTP, SNMP.	CO1	L2	12M

OR

10	Describe details about Cryptographic algorithms.	CO1	L2	12M

*** END ***

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)
MCA I Year II Semester Regular & SupplementaryExaminations August-2024
Java Programming

Time: 3 Hours
Max. Marks: 60

(Answer all Five Units 5 x 12 = 60 Marks)

UNIT-I

1		Identify the different types of control flow statements in java.	CO1	L2	12M

OR

| 2 | a | Briefly discuss about type conversion. | CO1 | L2 | 6M |
| | b | Clearly explain break and continue with example program. | CO1 | L2 | 6M |

UNIT-II

| 3 | a | What is an abstract class? Construct an example. | CO2 | L1 | 6M |
| | b | Identify the differences between an interface and abstract class. | CO2 | L2 | 6M |

OR

| 4 | a | Write about interface? | CO2 | L1 | 4M |
| | b | Identify how to define and implement an interface. Explain with suitable example. | CO2 | L2 | 8M |

UNIT-III

| 5 | | What is java collection framework? Explain detail about the ArrayList & LinkedList with an example. | CO3 | L2 | 12M |

OR

| 6 | a | Explain the types of Inputstream and Outputstream with an example. | CO3 | L2 | 6M |
| | b | What is Scanner class? Describe in details Byte Stream & Character Stream with an example. | CO3 | L2 | 6M |

UNIT-IV

| 7 | a | Briefly explain about Exception hierarchy. | CO4 | L2 | 6M |
| | b | Discuss in details about rethrowing exception with an example. | CO4 | L2 | 6M |

OR

| 8 | a | What are thread priorities? | CO4 | L1 | 6M |
| | b | Explain in detail about interrupting threads. | CO4 | L2 | 6M |

UNIT-V

| 9 | | Write a program to develop a sample application using Jpanel and Jframe. | CO5 | L1 | 12M |

OR

| 10 | a | What is an applet? Analyze the four methods of applet. | CO5 | L4 | 6M |
| | b | Explain in detail life-cycle of an applet. | CO5 | L2 | 6M |

*** END ***

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)
MCA I Year II Semester Regular & Supplementary Examinations August-2024
COMPUTER GRAPHICS

Time: 3 Hours **Max. Marks: 60**

(Answer all Five Units **5 x 12 = 60** Marks)

UNIT-I

1	a	Describe Computer Graphics.	CO2	L2	3M
	b	Indentify various applications of Computer Graphics.	CO2	L2	9M

OR

2	a	Construct the steps for Line DDA Algorithm. With example	CO2	L6	8M
	b	Develop a program to implement Line DDA Algorithm.	CO2	L3	4M

UNIT-II

3	a	Explain 2D Rotation with an example.	CO4	L2	6M
	b	Demonstrate Scaling in 2D with an example.	CO4	L2	6M

OR

4	a	Demonstrate Translation in 3D with an example.	CO4	L2	6M
	b	Explain 3D Rotation with an example.	CO4	L2	6M

UNIT-III

5		Analyze the steps to clip a line by using Cohen-Sutherland algorithm with an example.	CO3	L3	12M

OR

6	a	Define Clipping. Explain types of Clipping.	CO3	L2	6M
	b	Illustrate point clipping with an example.	CO3	L3	6M

UNIT-IV

7	a	Describe Depth-Sort Method.	CO5	L1	6M
	b	Illustrate Z-Buffer Method with an algorithm.	CO5	L3	6M

OR

8		Explain the following in details	CO5	L2	12M

    i)   Ambient Light
    ii)   Diffuse Reflection
    iii)   Specular Reflection

UNIT-V

9	a	Write short notes on XYZ Color Model.	CO6	L1	4M
	b	Explain RGB Color Model in detail.	CO6	L2	8M

OR

10	a	Write short notes on Animation.	CO6	L1	6M
	b	Identify various application areas of Animation.	CO6	L3	6M

*** END ***

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)
MCA I Year II Semester Regular & Supplementary Examinations August-2024
DATABASE MANAGEMENT SYSTEM

Time: 3 Hours   **Max. Marks: 60**

(Answer all Five Units **5 x 12 = 60** Marks)

UNIT-I

1	a	What are the problems in file system data management?	CO1	L1	6M
	b	Explain various applications of DBMS.	CO1	L2	6M

OR

2	a	Define Entity. Explain types of Entity Set.	CO2	L2	6M
	b	Explain Relationship set with its types.	CO2	L2	6M

UNIT-II

3	Define and Explain the following with an example. i). Super Key ii) Candidate Key iii) Primary Key iv) Foreign Key	CO2	L2	12M

OR

4	Explain in detail about Relational Calculus and with their types.	CO2	L2	12M

UNIT-III

5	a	List out various Data Definition Language commands with Syntax & examples.	CO4	L3	6M
	b	List out various Data Manipulation Language commands with Syntax & examples.	CO4	L3	6M

OR

6	a	Classify SQL Functions. Explain String functions with explanations.	CO4	L4	6M
	b	Explain Numeric Functions in SQL with example.	CO4	L2	6M

UNIT-IV

7	a	What is Functional Dependencies?	CO4	L1	4M
	b	Discuss about different functional dependencies with examples.	CO4	L3	8M

OR

8	Explain about 3NF and BCNF with relevant table structure.	CO4	L3	12M

UNIT-V

9	a	What is meant by File Organization?	CO6	L1	6M
	b	Briefly discuss different types of file organization.	CO6	L2	6M

OR

10	Explain about concurrency control based on time-stamp ordering.	CO6	L2	12M

*** END ***

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)
MCA I Year II Semester Regular & Supplementary Examinations August-2024
SOFTWARE ENGINEERING

Time: 3 Hours   Max. Marks: 60

(Answer all Five Units **5 x 12 = 60** Marks)

UNIT-I

1		Define Software, Software Engineering and Process? Discuss nature of Software.	CO1	L1	12M

OR

2	a	Explain the levels in CMMI Model.	CO2	L2	6M
	b	What is Agile development and explain it?	CO1	L5	6M

UNIT-II

3	a	What is the procedure for SRS document process?	CO2	L1	6M
	b	What is class based modeling? Explain.	CO2	L3	6M

OR

4		Define and explain functional and non-functional requirements. What are the importance of requirement modeling.	CO2	L1	12M

UNIT-III

5		Define Component. Write a short note on Designing Class based components.	CO3	L1	12M

OR

6		Explain the following. i)Component level design patterns ii) User interface design patterns.	CO3	L3	12M

UNIT-IV

7		Explain Software testing strategies.	CO4	L5	12M

OR

8		Identify the role of Security Engineering and risk analysis and discuss Security assurance.	CO4	L3	12M

UNIT-V

9	a	Discuss Metrics for source code.	CO5	L6	6M
	b	Define and explain Software Reengineering.	CO5	L1	6M

OR

10		What are Umbrella Activities? Briefly explain.	CO5	L1	12M

*** END ***