Code No: R20A0513

R20

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

III B.Tech I Semester Regular Examinations, December 2022

Artificial Intelligence

(CSE, IT, CSE-CS, CSE-DS, CSE-IOT)

Roll No										

Time: 3 hours **Max. Marks: 70**

Note: This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

***

SECTION-I

1	*A*	List and explain various AI Languages.	[7M]
	B	What are the basic components of AI problem solving methodology? Illustrate with an example.	[7M]
		OR	
2	*A*	Illustrate the heuristic Hill Climbing Algorithm with an example.	[7M]
	B	Explain A* Algorithm with example.	[7M]

SECTION-II

3	*A*	Discuss Alpha-Beta Pruning and its advantages over min-max method.	[10M]
	B	Explain the Syntax and Semantics of Propositional Logic.	[4M]
		OR	
4	*A*	Explain forward chaining and backward chaining	[7M]
	B	Compare and contrast the two variants of Logic-Predicate and Propositional.	[7M]

SECTION-III

5	*A*	Explain the issues in Knowledge Representation. Define Inheritance in Semantic Net.	[8M]
	B	Differentiate between monotonic and non monotonic reasoning.	[6M]
		OR	
6	*A*	Explain acting under uncertainity domain	[5M]
	B	Explain Bayesian Networks?	[9M]

SECTION-IV

7	*A*	Differentiate between Supervised Learning and Unsupervised Learning.	[4M]
	B	Discuss Winston's learning briefly with neat sketch.	[10M]
		OR	
8	*A*	Describe the role of information gain in Decision Tree Learning.	[7M]
	B	Explain decision tree algorithm.	[7M]

SECTION-V

9	*A*	Explain the Phases in Building Expert System.	[9M]
	B	Explain the Applications of the Expert Systems.	[5M]
		OR	
10	*A*	List the Characteristics of Expert Systems. Classify various Expert System shells and tools.	[8M]
	B	Explain about MYCIN Expert system in detail.	[6M]

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R18

Code No: R18A1205

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

III B.Tech I Semester Regular/Supplementary Examinations, Dec-21/Jan-22

Artificial Intelligence

(EEE, CSE & IT)

Roll No										

Time: 3 hours **Max. Marks: 70**

Note: This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

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SECTION-I

1	Explain the Heuristic Search Techniques. List and explain the applications of Artificial Intelligence	**[14M]**
	OR	
2	What is a Breadth first search of the search tree? Write an algorithm to conduct Breadth first search explain with example and also mention advantages and disadvantages.	**[14M]**

SECTION-II

3	Give a brief note on Alpha-Beta Pruning. How Mini max Search is useful and implemented.	**[14M]**
	OR	
4	How Probabilistic Reasoning is useful in Basic Knowledge Representation. Compare Propositional Logic & First-Order Logic with their features	**[14M]**

SECTION-III

5	Explain in detail about Other Knowledge Representation Schemes along with its advantages and disadvantages.	**[14M]**
	OR	
6	Discuss about Acting Under Uncertainty? Analyze the Bayesian Belief networks with clear examples.	**[14M]**

SECTION-IV

7	Illustrate Learning by Taking Advice & Learning in Problem Solving by considering two real time examples	**[14M]**
	OR	
8	Describe the role of information gain in decision tree learning	**[14M]**

SECTION-V

9	With the help of a neat diagram, explain the Expert System Architecture. List its Applications	**[14M]**
	OR	
10	Explain Various Phases in building Expert Systems. Write the procedure for Knowledge Acquisition by using Expert Systems.	**[14M]**

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R18

Code No: R18A1205

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

III B.Tech I Semester Supplementary Examinations, November 2022

Artificial Intelligence

(EEE, CSE & IT)

Roll No										

Time: 3 hours Max. Marks: 70

Note: This question paper Consists of 5 Sections. Answer FIVE Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

***

SECTION-I

1 Define Artificial Intelligence. Explain the techniques of A.I. Also describe the characteristics of Artificial Intelligence [14M]

OR

2 A Explain real-world AI problems with examples [4M]

B Explain any two Heuristic Search algorithms? [10M]

SECTION-II

3 Explain min-max search and Alpha-Beta Pruning with examples [14M]

OR

4 What is First Order Logic? State and Prove Baye's Theorem and mention its applications? [14M]

SECTION-III

5 Write down logical representations for the following sentences suitable to use with Generalized Modus Ponens: [14M]

(a) Horses, cows and pigs are mammals

(b) An offspring of a horse is a horse

(c) Bluebeard is a horse

(d) Offspring and parent are inverse relations

(e) Every mammal has a parent. Draw the proof tree generated by an exhaustive back-ward chaining algorithm for the query ∃h Horse(h).

OR

6 Explain how to resolve Uncertainty and Bayesian Belief Network with an example [14M]

SECTION-IV

7 Discuss the issues to be addressed in order to extend decision tree induction to a wide variety of platforms. [14M]

OR

8 Explain Rote Learning, Learning by Taking Advice, Learning in Problem Solving with a Real world Example [14M]

SECTION-V

9 With the help of a neat diagram, explain the Expert System Architecture. List its Applications [14M]

OR

10 What is Shell in Expert System? Discuss in detail about Shell and Knowledge Acquisition Techniques? [14M

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Code No: R18A1205

R18

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

III B.Tech I Semester Supplementary Examinations, July/August 2021

Artificial Intelligence

(EEE, CSE & IT)

Roll No

Time: 3 hours **Max. Marks: 70**

Answer Any Five Questions

All Questions carries equal marks.

***

1 Discuss about the advantage of heuristic search techniques and explain generic best first search strategy [14M]

2 a. Define Artificial Intelligence. Explain the techniques of A.I. Also describe the characteristics of Artificial Intelligence. [7M]

b. Discuss about how backtracking search strategy performs. [7M]

3 Describe the mini max algorithm with an example. [14M]

4 a. Discuss about backward chaining algorithm [7M]

b. Describe probabilistic reasoning with example. [7M]

5 Explain how to represent Knowledge in an Uncertain Domain. [14M]

6 a. Discuss about Knowledge Representation Issues in detail. [7M]

b. Explain rule based methods for uncertain reasoning. [7M]

7 a. Explain how to do learning from examples. [7M]

b. Describe the role of information gain in decision tree learning. [7M]

8 Explain the Expert System Architecture with the help of a neat diagram [14M]

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(Autonomous Institution – UGC, Govt. of India)

IV B.Tech I Semester Supplementary Examinations, Dec-21/Jan-22

Artificial Intelligence

(CSE & IT)

Roll No										

Time: 3 hours **Max. Marks: 70**

Note: This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

***

SECTION-I

1 a. With Neat Schematic Diagram, Explain the Working Methodology of Components of an Agent Program. [7M]

b. Explain the following Uninformed Search Strategies with Suitable Examples: [7M]

i. Breadth First Search

ii. Iterative Deeping Depth First Search

OR

2 a. Define Agent Program. Explain the Following Agent Programs with Respect to Intelligent Systems [7M]

i. Simple Reflex Agents

ii. Model-Based Reflex Agent

b. Explain the following Heuristic Search Strategies with Suitable Examples: [7M]

i. Hill Climbing

ii. Generic Best-First Algorithm

SECTION-II

3 a. Explain Stochastic Search Algorithm [7M]

b. Discuss the Models for First Order Logic [7M]

OR

4 a. Explain Alpha-Beta Algorithm and Its Move Ordering. [7M]

b. Explain the Following Syntax and Semantics of First Order Logic [7M]

i. Atomic Sentences

ii. Complex Sentences

SECTION-III

5 a. Explain Mental Events and Mental Objects [7M]

b. Explain Non-Monotonic Reasoning with an Example. [7M]

OR

6 Define Bayesian Network. Explain the Semantics of Bayesian Network. [14M]

SECTION-IV

7 Explain the Learning from Decision Trees and How Attributes are Selected for Nodes in the Decision Trees [14M]

OR

8 a. Explain the Following Forms of Learning [7M]

i. Supervised Learning

ii. Unsupervised Learning

b. Explain Learning through Problem Solving with an Example [7M]

SECTION-V

9 Explain the Following with respect to Representing and Using Knowledge Domain:

i. If-Then Rules [7M]

ii. Semantic Networks [7M]

OR

10 a. Explain the Knowledge Acquisition and Inference Engine in Expert System. [7M]

Code No: R18A1205

R18

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

III B.Tech I Semester Regular Examinations, February 2021

Artificial Intelligence

(EEE, CSE & IT)

Roll No										

Time: 2 hours 30 min Max. Marks: 70

Answer Any Five Questions

All Questions carries equal marks.

***

1 Explain about uninformed search strategies with examples [14M]

2 a) Define Heuristic search? What are the advantages of Heuristic search? [7M]

b) Write about any one Heuristic technique [7M]

3 Discuss A* algorithm in detail. [14M]

4 Give a brief note on Alpha-Beta Pruning [14M]

5 Explain how to handle uncertain knowledge in detail. [14M]

6 Write about the Belief Bayesian Networks [14M]

7 a. . Discuss about Winston's Learning Program. [7M]

b. Briefly describe learning in Problem Solving [7M]

8 Discuss various ways of knowledge acquisition. [14M]

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Code No: R17A1204

R17

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

IV B.Tech I Semester Supplementary Examinations, July/August 2021

Artificial Intelligence

(CSE & IT)

Roll No										

Time: 3 hours **Max. Marks: 70**

Answer Any Five Questions

All Questions carries equal marks.

*****

1 a) Write completeness, optimality, time complexity and space complexity for all uninformed search strategies. [7M]

b) Compare and contrast DFS and BFS. [7M]

2 Explain simple reflex agents and goal-based agents with an example. [14M]

3 Discuss in detail about the A* algorithm using a suitable example [14M]

4 a) Explain backward chaining algorithm with an example. [7M]

b) Discuss probabilistic reasoning. [7M]

5 How to represent knowledge in uncertain domains? Discuss in detail. [14M]

6 Discuss probability concepts used for uncertainty reasoning. [14M]

7 a) Discuss learning by taking advice. [7M]

b) Explain in detail about decision trees. [7M]

8 a) Discuss in detail about components of an expert systems. [7M]

b) Differentiate Human system and Expert system. [7M]

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Code No: 117CD **R13**

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech IV Year I Semester Examinations, November/December - 2017

DATA WAREHOUSING AND DATA MINING

(Computer Science and Engineering)

Time: 3 Hours **Max. Marks: 75**

Note: This question paper contains two parts A and B.
Part A is compulsory which carries 25 marks. Answer all questions in Part A. Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

PART - A

(25 Marks)

1.a)	Define data warehouse.	[2]
b)	List the Data warehouse Characteristics.	[3]
c)	How can you go about filling in the missing values for this attribute?	[2]
d)	Why is the word data mining a misnomer?	[3]
e)	Give a note on Closed Frequent Item Set.	[2]
f)	Write the FP-graph algorithm.	[3]
g)	How prediction is different from classification?	[2]
h)	What is rule classification?	[3]
i)	Give a note on k means algorithm.	[2]
j)	List the Key Issues in Hierarchical Clustering.	[3]

PART – B

(50 Marks)

2.a) Make a comparisons between the MOLAP and HOLAP.
b) Discuss the star and snowflake schema in detail with suitable example. [5+5]

OR

3.a) Write the difference between designing a data warehouse and an OLAP cube.
b) Give a brief note on ROLAP. [5+5]

4. Explain concept hierarchy generation for the nominal data. [10]

OR

5.a) Describe the Feature Subset Selection.
b) Illustrate the Data Transformation by Normalization. [5+5]

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6. Make a comparison of Apriori and ECLAT algorithms for frequent item set mining in transactional databases. Apply these algorithms to the following data:

TID	LIST OF ITEMS
1	Bread, Milk, Sugar, TeaPowder, Cheese, Tomato
2	Onion, Tomato, Chillies, Sugar, Milk
3	Milk, Cake, Biscuits, Cheese, Onion
4	Chillies, Potato, Milk, Cake, Sugar, Bread
5	Bread, Jam, Mik, Butter, Chilles
6	Butter, Cheese, Paneer, Curd, Milk, Biscuits
7	Onion, Paneer, Chilies, Garlic, Milk
8	Bread, Jam, Cake, Biscuits, Tomato

[10]

OR

7. Briefly explain the Partition Algorithms. [10]

8. Discuss K- Nearest neighbor classification-Algorithm and Characteristics. [10]

OR

9. How does the Naïve Bayesian classification works? Explain in detail. [10]

10.a) Give a brief note on PAM Algorithm.

b) What is the drawback of k-means algorithm? How can we modify the algorithm to diminish that problem? [5+5]

OR

11. What are the different clustering methods? Explain in detail. [10]

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Code No: 117CD **R13**

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech IV Year I Semester Examinations, March - 2017

DATA WAREHOUSING AND DATA MINING

(Computer Science and Engineering)

Time: 3 Hours **Max. Marks: 75**

Note: This question paper contains two parts A and B.

Part A is compulsory which carries 25 marks. Answer all questions in Part A. Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

Part- A (25 Marks)

1.a) What is a data mart? [2]
b) What is a fact table? [3]
c) What is data mining? [2]
d) List similarity measures. [3]
e) What is maximal frequent itemset? [2]
f) How to compute confidence measure for an association rule? [3]
g) What is classification? [2]
h) Define information gain. [3]
i) What is an outlier? [2]
j) List the demerits of k-means algorithm. [3]

Part-B (50 Marks)

2. What are the various components of data warehouse? Explain their functionality in detail. [10]

OR

3. What is the significance of OLAP in data warehouse? Describe OLAP operations with necessary diagram/example. [10]

4. Explain different data mining tasks for knowledge discovery. [10]

OR

5. What is the need of dimensionality reduction? Explain any two techniques for dimensionality reduction. [10]

6. A database has six transactions. Let min-sup = 50% and min-conf = 75%.

TID	List of items
001	Pencil, sharpener, eraser, color papers
002	Color papers, charts, glue sticks
003	Pencil, glue stick, eraser, pen
004	Oil pastels, poster colours, correction tape
005	Whitener, pen , pencil, charts, glue stick
006	Colour pencils, crayons, eraser, pen

Find all frequent item sets using Apriori algorithm. List all the strong association rules. [10]

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OR

7.a) What are the advantages of FP-Growth algorithm?

b) Discuss the applications of association analysis. [5+5]

8. Explain decision tree induction algorithm for classifying data tuples and discuss suitable example. [10]

OR

9.a) What are the characteristics of k-nearest neighbor algorithm?

b) How to evaluate the classifier accuracy? [5+5]

10. What is the goal of clustering? How does partitioning around medoids algorithm achieve this goal? [10]

OR

11.a) Differentiate between AGNES and DIANA algorithms.

b) How to access the cluster quality? [5+5]

--ooOoo—

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Code No: 117CD

R13

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech IV Year I Semester Examinations, November/December - 2016

DATA WAREHOUSING AND DATA MINING

(Computer Science and Engineering)

Time: 3 Hours **Max. Marks: 75**

Note: This question paper contains two parts A and B.

Part A is compulsory which carries 25 marks. Answer all questions in Part A. Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

PART- A

(25 Marks)

1.a) Define Data ware housing. [2]

b) Differentiate OLAP, ROLAP and HOLAP. [3]

c) Discuss about subset selection [2]

d) Mention any three measures of Similarity. [3]

e) Define Association rule mining two step processes. [2]

f) Write short note on support and confidence measures. [3]

g) Mention types of classifier techniques. [2]

h) Define Pre pruning and post pruning. [3]

i) Discuss on Agglomerative and Divisive clustering techniques. [2]

j) Mention the various types of clustering methods. [3]

PART-B

(50 Marks)

2. Explain data mining as a step process of knowledge discovery. Mention the Functionalities of Data mining. [10]

OR

3. Differentiate Operational database systems and data warehousing. Explain the star schema and fact constellation schemas. [10]

4. Explain the various Data pre-processing techniques. How data reduction helps in data pre-processing. [10]

OR

5. How can the data cube be efficiently constructed for discovery-driven Exploration? Explain various operations of a Data Cube. [10]

6. How can we mine multilevel Association rules efficiently using concept hierarchies? Explain. Illustrate with an A-priori algorithm for the given dataset below. [10]

TID	List of items
001	milk, dal, sugar, bread
002	Dal, sugar, wheat,jam
003	Milk, bread, curd, paneer
004	Wheat, paneer, dal, sugar
005	Milk, paneer, bread
006	Wheat, dal, paneer, bread

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OR

7. Can we design a method that mines the complete set of frequent item sets without candidate generation? If yes, explain with example table mentioned above. [10]

8. Describe the data classification process with a neat diagram. How does the Naive Bayesian classification works? Explain. [10]

OR

9. What is prediction? Explain the various prediction techniques. Explain about Decision tree Induction classification technique. [10]

10. What are outliers? Discuss the methods adopted for outlier detection. [10]

OR

11. State K-means algorithm. Apply k-means algorithm with two iterations to form two clusters by taking the initial cluster centers as subjects 1 and 4. [10]

Subject	A	B
1	1.0	1.0
2	1.5	2.0
3	3.0	4.0
4	5.0	7.0
5	3.5	5.0
6	4.5	5.0
7	3.5	4.5

--ooOoo--

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R20

Code No: R20A0511

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

III B.Tech I Semester Regular Examinations, December 2022

Software Engineering-SET-1

(CSE, IT, CSE-CS, CSE-AIML, CSE-IOT)

Roll No										

Time: 3 hours **Max. Marks: 70**

Note: This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

***

		SECTION-I	
1	*A*	Discuss about failure curves for hardware and software with a neat diagram.	**[7M]**
	B	Illustrate about generic process framework activities for software engineering.	**[7M]**
		OR	
2	*A*	Describe about software engineering layers with a neat diagram.	**[7M]**
	B	Differentiate between waterfall and incremental model.	**[7M]**
		SECTION-II	
3	*A*	Illustrate about Functional Requirements and Non-functional Requirements.	**[7M]**
	B	Interpret about the feasibility studies of requirements engineering process.	**[7M]**
		OR	
4	*A*	Describe about requirements validation and management.	**[7M]**
	B	Explain about the importance of sequence and activity diagrams in system design.	**[7M]**
		SECTION-III	
5	*A*	Describe about translating the requirements model into the design model.	**[7M]**
	B		**[7M]**
		OR	
6	*A*	Briefly explain about software design concepts.	**[7M]**
	B	Discuss about the 3 golden rules of performing user interface design.	**[7M]**
		SECTION-IV	
7	*A*	Analyze about flow graph notation and independent paths with an example	**[7M]**
	B	Briefly explain about different categories of risks in risk management.	**[7M]**
		OR	
8	*A*	Describe about graph-based testing methods with an example.	**[7M]**
	B	Elaborate about RMMM plan in software projects.	**[7M]**
		SECTION-V	
9	*A*	Discuss about the elements of software quality assurance.	**[7M]**
	B	Briefly explain about software reliability in software projects.	**[7M]**
		OR	
10	*A*	Describe about the software quality in software development.	**[7M]**
	B		**[7M]**
		***********	

Code No: **R20A0511**

R20

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

III B.Tech I Semester Regular Examinations, December 2022

Software Engineering

(CSE, IT, CSE-CS, CSE-AIML, CSE-IOT)

Roll No										

Time: 3 hours **Max. Marks: 70**

Note: This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

***

SECTION-I

1	*A*	Briefly explain about advantages of prototype model with a neat diagram.	**[7M]**
	B	Describe about different types of software myths.	**[7M]**
		OR	
2	*A*	Elaborate about the unified process model with a neat diagram.	**[7M]**
	B	Interpret about personal and team process models in software development.	**[7M]**

SECTION-II

3	*A*	Illustrate about software requirements document with an example.	**[7M]**
	B	Discuss about functional and non-functional requirements with an example.	**[7M]**
		OR	
4	*A*	Describe about structural and behavioral diagrams in uml.	**[7M]**
	B	Interpret about requirements elicitation and analysis in requirements engineering process	**[7M]**

SECTION-III

5	*A*	Describe architecture in software design.	**[7M]**
	B	Outline the different types of architectural styles used in developing a software product.	**[7M]**
		OR	
6	*A*	Briefly explain about importance of data-centered architecture with a neat diagram.	**[7M]**
	B	Elaborate about the user interface analysis and design in software development.	**[7M]**

SECTION-IV

7	*A*	Analyze about unit testing and integration testing.	**[7M]**
	B	Briefly explain about debugging process with a neat diagram.	**[7M]**
		OR	
8	*A*	Describe about black-box testing with an example.	**[7M]**
	B	Differentiate between reactive vs proactive risk strategies.	**[7M]**

SECTION-V

9	*A*	Discuss about the important activities involved in management of software quality assurance.	**[7M]**
	B	Briefly explain about goals attributes and metrics of software quality assurance.	**[7M]**
		OR	
10	*A*	Describe about the measures of reliability and safety in software quality assurance.	**[7M]**
	B	Analyze about the iso 9000 quality standards	**[7M]**

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R18

Code No: R18A0511

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

II B.Tech II Semester Supplementary Examinations, December 2022

Software Engineering

(IT)

Roll No										

Time: 3 hours **Max. Marks: 70**

Note: This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

***

SECTION - I

1. a) Briefly discuss the advantages and drawbacks of waterfall model. **[7M]**
   b) Explain the basic principle of Prototyping with an example. **[7M]**

OR

2. a) Discuss the evolving role of software in light of present day software applications. **[7M]**
   b) Express your understanding on the umbrella activities of a software process. **[7M]**

SECTION – II

3. a) "Non-functional requirements are also essential for customer satisfaction"-Justify this statement with suitable justification. **[7M]**
   b) Write short note on requirements validation process. **[7M]**

OR

4. a) What are the essential components of SRS document? Explain by taking a simple application of your choice. **[7M]**
   b) Distinguish between functional and non-functional requirements. **[7M]**

SECTION – III

5. a) What are the golden rules of user interface? Briefly explain. **[7M]**
   b) How can we assess the design quality? Briefly explain. **[7M]**

OR

6. a) What is the role of software architecture? Describe different software architecture styles.**[7M]**
   b) Write short note on key activities in Object Oriented Design, **[7M]**

SECTION – IV

7. a) Distinguish between black box and white box testing by taking an example software application of your choice. **[7M]**
   b) How could you achieve 100% testing coverage? Explain. **[7M]**

OR

8. a) What do you understand by software testing and how can you decide that the testing can be stopped. **[7M]**
   b) "It is always advisable to identify and fix the bug during execution phase"-Justify this statement with suitable justification. **[7M]**

SECTION – V

9. a) Write short note on RMMM plan. **[7M]**
   b) What are the various categories of risks? Give an overview about Risk Management. **[7M]**

OR

10. What is the need of Risk Management and explain various activities connected to Risk Management? **[14M]**

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R18

Code No: R18A0511

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

II B.Tech II Semester Supplementary Examinations, February 2022

Software Engineering

(IT)

Roll No										

Time: 3 hours **Max. Marks: 70**

Note: This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

***

SECTION-I

1 a) Explain about process frame work in software engineering. **[8M]**
b) Explain different applications of software. **[6M]**

OR

2 a) Explain the unified process model with a neat sketch. **[10M]**
b) Write a short note on extreme programming. **[4M]**

SECTION-II

3 a) Explain about requirements elicitation and analysis. **[8M]**
b) Explain about system requirements and user requirements. **[6M]**

OR

4 What is a system model? Explain different types of system models. **[14M]**

SECTION-III

5 a) Explain about software architecture with suitable example. **[8M]**
b) Discuss about data design. **[6M]**

OR

6 a) How can you design user interface? Explain. **[8M]**
b) Briefly explain object oriented design process. **[6M]**

SECTION-IV

7 a) What do you mean by software testing? Explain about integration testing. **[8M]**
b) Explain about system testing. **[6M]**

OR

8 a) Explain different software product metrics. **[10M]**
b) Write a note on software quality factors. **[4M]**

SECTION-V

9 Explain about risk management. **[14M]**

OR

10 a) Explain about CMMI. **[7M]**
b) What is the need of Software Quality Assurance. **[7M]**

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R18

Code No: R18A0511

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

II B.Tech II Semester Regular/Supplementary Examinations, July 2021

Software Engineering

(IT)

Roll No										

Time: 3 hours **Max. Marks: 70**

Answer Any **Five** Questions

All Questions carries equal marks.

***

1	a)	Define the term Software Engineering. Describe its various characteristics.	**[7M]**
	b)	State and explain various types of software myths related to management.	**[7M]**
2	a)	Explain Waterfall model with a neat diagram.	**[10M]**
	b)	Write the advantages and disadvantages of waterfall model.	**[4M]**
3	a)	Explain clearly about software requirements document.	**[7M]**
	b)	Differentiate between functional and non-functional requirements.	**[7M]**
4		Discuss about principal requirements engineering process activities with a neat diagram.	**[14M]**
5		Write the taxonomy of architectural styles and give a brief description of each style.	**[14M]**
6	a)	Explain about user interface design.	**[8M]**
	b)	Explain the golden rules of user interface design.	**[6M]**
7	a)	Explain about unit testing considerations and procedures.	**[7M]**
	b)	Write the differences between black box testing and white box testing.	**[7M]**
8	a)	Explain about formal technical reviews.	**[7M]**
	b)	What is RMMM? Explain about RMMM plan.	**[7M]**

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R18

Code No: R18A0511

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

III B.Tech I Semester Regular/Supplementary Examinations, Dec-21/Jan-22

Software Engineering

(CSE)

Roll No										

Time: 3 hours **Max. Marks: 70**

Note: This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

***

SECTION-I

1 List and explain the following **[7M]**

a) Activities of generic process framework for software engineering

b) Umbrella activities **[7M]**

OR

2 What is a software myth? Explain the changing nature of the software. **[14M]**

SECTION-II

3 List and explain distinct tasks of requirements engineering **[14M]**

OR

4 Explain the Functional and Non-Functional requirements **[14M]**

SECTION-III

5 What is design process? Explain the characteristics of good design **[14M]**

OR

6 What is software architecture? Why is it so important?. **[14M]**

SECTION-IV

7 What is software testing? Explain unit testing in detail. **[14M]**

OR

8 Explain the metrics for Testing? **[14M]**

SECTION-V

9 Differentiate between Reactive and Proactive risk strategies **[14M]**

OR

10 Define RMMM? Explain RMMM plan in detail **[14M]**

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Code No: R18A0511

R18

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

III B.Tech I Semester Supplementary Examinations, July/August 2021

Software Engineering

(CSE)

Roll No										

Time: 3 hours **Max. Marks: 70**

Answer Any **Five** Questions

All Questions carries equal marks.

***

1	a)Discuss about the role of Changing Nature of Software and Software myths in software engineering	**[7M]**
	b)Explain spiral model with its merits and demerits	**[7M]**
2	a) Explain in detail about various process models.	**[7M]**
	b) What is the role of process assessment in the process framework	**[7M]**
3	a) Differentiate between functional and non-functional requirements.	**[7M]**
	b) Discuss the various steps in requirement engineering. What are the work products of engineering the requirements?	**[7M]**
4	a)Explain the Functional and non-functional requirements in requirement engineering	**[7M]**
	b) Explain Context Models and Behavioral models with their importance	**[7M]**
5	a)Define Software architecture. Explain why it may be necessary to design the system architecture before the specifications. Compare function oriented and object oriented designs.	**[7M]**
	b)What do you mean by the terms cohesion and coupling in the context of software engineering? How are these concepts useful in arriving at a good design of a system explain with example.	**[7M]**
6	a)Explain the process of mapping dataflow into software architecture.	**[7M]**
	b)List the golden rules of user interface design	**[7M]**
7	a) What do you mean by risk management? Explain how to select the best risk reduction technique when there are many ways of reducing a risk?	**[7M]**
	b) Explain about formal technical reviews.	**[7M]**
8	a)Define software quality assurance .State various SQA activities	**[7M]**
	b) What are the main objectives of Software verification and validation?Briefly explain different V and V techniques.	**[7M]**

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R18

Code No: R18A0511

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

II B.Tech II Semester Regular Examinations, October/November 2020

Software Engineering

(IT)

Roll No										

Time: 2 hours **Max. Marks: 70**

Answer Any **Four** Questions

All Questions carries equal marks.

***

1 a) Define software engineering and discuss about software myths

b) Illustrate the software process framework

2 a) Compare the incremental model and spiral model with neat diagram

b) List out the merits and demerits of waterfall model

3 What do you mean by feasibility study? Demonstrate functional and non-functional requirements with suitable examples

4 Explain the data models with suitable examples

5 a) Explain Golden rules for user interface design

b) Discuss about Software architecture

6 Explain in detail about object oriented design process with suitable examples

7 a) Illustrate a strategic approach to software testing

b) Explain the concept of Debugging

8 What do you mean by SQA and Explain the ISO 9000 Quality Standards

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R18

Code No: R18A0511

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

III B.Tech I Semester Supplementary Examinations, June 2022

Software Engineering

(CSE)

Roll No										

Time: 3 hours **Max. Marks: 70**

Answer Any **Five** Questions

All Questions carries equal marks.

***

1	With a neat diagram explain the spiral model	**[14M]**
2	Explain the phases of unified process model with a diagram	**[14M]**
3	Explain the following with respect to requirements validation	
	a) Different types of checks	**[7M]**
	b) Requirements validation techniques	**[7M]**
4	Explain in detail about Event-driven and Data-driven modeling	**[14M]**
5	Explain object oriented design process using UML	**[14M]**
6	Explain the following software architectures	
	a) Data flow Architecture	**[7M]**
	b) Call and Return Architectures	**[7M]**
7	Explain black-box and White-box testing	**[14M]**
8	Explain Capability Maturity Model Integration (CMMI) in detail	**[14M]**

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R18

Code No: R18A0511

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

II B.Tech II Semester Supplementary Examinations, June 2022

Software Engineering

(IT)

Roll No										

Time: 3 hours **Max. Marks: 70**

Answer Any **Five** Questions

All Questions carries equal marks.

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1. Discuss various phases of waterfall model in detail. **(14M)**

2. a) What is unified process? Discuss its suitability to present day software applications **(7M)**
   b) Write short note on various categories of myths connected to software industry**.(7M)**

3. a) What is the use of an Activity diagram and draw an activity diagram for withdrawing money from a Bank ATM. **(7M)**
   b) How do you create a process that can manage requirements unpredictability?Explain. **(7M)**

4. a) Draw the sequence diagram for booking an item in an online ecommerce website. **(7M)**
   b) Explain software requirements engineering process in brief. **(7M)**

5. a)What are the merits of an Object Oriented Design process? Explain. **(7M)**
   b) Write short note on Design concepts. **(7M)**

6. a) What is modularity and write its importance by keeping maximization of cohesion and minimization of coupling as the basis**. (7M)**
   b) "Work breakdown structure helps in on time delivery of software products". Justify this statement. **(7M)**

7. a) Why does software testing need extensive planning? Explain. **(7M)**
   b) Write short note on the metrics for software design model. **(7M)**

8. a) Write short note on CMMI and its role in quality improvement. **(7M)**
   b) What is the importance of FTR in software quality assurance and write various steps in carrying out FTR. **(7M)**

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R18

Code No: R18A0511

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

III B.Tech I Semester Supplementary Examinations, November 2022

Software Engineering

(CSE)

Roll No										

Time: 3 hours **Max. Marks: 70**

Note: This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

***

SECTION-I

1	***A***	List the general principles & Process Frame work in software engineering	**[7M]**
	B	Compare different types of myths in Software Engineering	**[7M]**
		OR	
2	***A***	Discuss in detail about the layers involved in Unified Process model	**[7M]**
	B	Sketch and explain Evolutionary model.	**[7M]**

SECTION-II

3	***A***	Classify different types of Requirements.	**[4M]**
	B	Discuss how an engineer responsible for drawing up a system requirements specification might keep track of the relationships between functional and non-functional requirements.	**[10M]**
		OR	
4	***A***	What is the main aim of requirement Engineering? Describe its four sub-processes and deliverable of each sub-process?	**[7M]**
	B	What is SRS Document? Explain in detail about the structure of a software requirement document	**[7M]**

SECTION-III

5	***A***	Explain about the various design concepts considered during design?	**[7M]**
	B	With a neat diagram, explain various architectural styles & patterns?	**[7M]**
		OR	
6	***A***	Explain the following terms with respect to software design: (i) Data design (ii) architectural design with neat Examples	**[7M]**
	B	Describe the golden rules of User Interface Design	**[7M]**

SECTION-IV

7		What is black box testing? Explain the different types of black box testing strategies. Explain by considering suitable examples.	**[14M]**
		OR	
8	***A***	Discuss in detail about various software testing strategies.	**[7M]**
	B	What are the Various Metrics used for analysis and Design?	**[7M]**

SECTION-V

9	***A***	Propose RMMM plan for "staff inexperienced" risk while developing a software project	**[7M]**
	B	What is the necessity of Quality assurance in Software Engineering?	**[7M]**

OR

10	***A***	What is Meant by Software Quality? Give an overview of various software Quality factors?	**[7M]**
	B	What is SQA? Discuss in detail SQA Activities?	**[7M]**

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R17

Code No: R17A0511

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

II B.Tech II Semester Supplementary Examinations, February 2022

Software Engineering

(IT)

Roll No										

Time: 3 hours **Max. Marks: 70**

Note: This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

***

SECTION-I

1 a) Discus the evolving role of Software. **[8M]**

b) What is Team Software Process and list out its objectives? **[6M]**

OR

2 How the waterfall and the prototyping models can be accommodated in the spiral process model. Analyze. **[14M]**

SECTION-II

3 a) What is requirement engineering? State its process and illuminate the requirements of elicitation problem. **[8M]**

b) Why the customer interaction is a difficult process? Explain one formal procedure used for customer interaction. **[6M]**

OR

4 a) Differentiate between data models and object models with illustration **[7M]**

b) How do you fit the right prototyping approach in software system models? Explain. **[7M]**

SECTION-III

5 a) Illustrate design quality in the context of design engineering. **[7M]**

b) How Software architecture is useful in creating an architectural design. **[7M]**

OR

6 Explain about the User interface analysis and design. **[14M]**

SECTION-IV

7 a) Contrast the validation testing with system testing. **[7M]**

b) Interpret the art of debugging in software testing methodology. **[7M]**

OR

8 Discuss about the Metrics for testing and source code. **[14M]**

SECTION-V

9 a) Illustrate reactive vs. proactive risk strategies in risk management. **[7M]**

b) How far the risk refinement is useful in risk management. **[7M]**

OR

10 a) Describe the software quality assurance. **[7M]**

b) Exemplify software reliability. **[7M]**

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R17

Code No: R17A0511

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

II B.Tech II Semester Supplementary Examinations, July 2021

Software Engineering

(IT)

Roll No										

Time: 3 hours **Max. Marks: 70**

Answer Any **Five** Questions

All Questions carries equal marks.

***

1	a)	What do you mean by Software Myth? Explain Management Myths and Customer Myths.	**[7M]**
	b)	Explain a generic process framework for software engineering activities.	**[7M]**
2		Explain the process areas required to achieve various maturity levels in CMMI.	**[14M]**
3	a)	Differentiate between functional and non-functional requirements in software engineering.	**[7M]**
	b)	Explicit effects on software requirement collection?	**[7M]**
4		Interpret the Context Models and Behavioural models.	**[14M]**
5	a)	What is design process and clarify it with respect to design engineering?	**[7M]**
	b)	Analyse the data design and architectural styles in software engineering process.	**[7M]**
6	a)	Elucidate in detail about the characteristics and criteria for a good design.	**[7M]**
	b)	Describe the design procedure for data acquisition system.	**[7M]**
7		Why is it so important to include boundary values in your black-box test data? Illustrate with examples in which a test suite developed using black box techniques might give the impression that 'everything is OK", while a test suite developed with whit box testing techniques (for example, branch coverage) might uncover a fault and vice versa.	**[14M]**
8	a)	Deliberate the procedure of formal technical reviews in testing the software.	**[7M]**
	b)	Identify the importance of the ISO 9000 quality standards in improving software quality.	**[7M]**

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R17

Code No: R17A0511

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

III B.Tech I Semester Supplementary Examinations, July/August 2021

Software Engineering

(CSE)

Roll No										

Time: 3 hours **Max. Marks: 70**

Answer Any **Five** Questions

All Questions carries equal marks.

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1	What is CMMMI? Explain in detail about CMMMI.	**[14M]**
2	Explain spiral model with its merits and demerits.	**[14M]**
3	Briefly explain the models used for structured analysis.	**[14M]**
4	Define the term software requirement. Explain different types of software requirements.	**[14M]**
5	Explain about design concepts.	**[14M]**
6	What is the need of user interface? Explain user interface design steps.	**[14M]**
7	Define software testing. Explain different software testing strategies.	**[14M]**
8	What is the need of software reviews? Explain.	**[14M]**

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R17

Code No: R17A0511

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

III B.Tech I Semester Supplementary Examinations, Dec-21/Jan-22

Software Engineering

(CSE)

Roll No										

Time: 3 hours **Max. Marks: 70**

Note: This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

***

SECTION-I

1 Discuss in detail about the layers involved in Unified Process model. **[14M]**

OR

2 Explain different software myths with respect to management, customer and practitioner with neat case studies. **[14M]**

SECTION-II

3 What is SRS Document. Explain in detail about the structure of a software requirement document. **[14M]**

OR

4 Draw an ER and DFD diagram for university information system. **[14M]**

SECTION-III

5 Draw a translating diagram for analysis model into a software design. Brief about each translations. **[14M]**

OR

6 Discuss the steps involved in effective User interface design. **[14M]**

SECTION-IV

7 Explain control structure testing. What are the different testing techniques involved in it? **[14M]**

OR

8 Explain in detailed about Black-Box and White-Box testing. **[14M]**

SECTION-V

9 Explain software quality assurance? **[14M]**

OR

10 Analyze on the concept of risk projection. **[14M]**

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R17

Code No: R17A0511

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

II B.Tech II Semester Supplementary Examinations, July 2021

Software Engineering

(IT)

Roll No										

Time: 3 hours **Max. Marks: 70**

Answer Any **Five** Questions

All Questions carries equal marks.

***

1	a)	What do you mean by Software Myth? Explain Management Myths and Customer Myths.	**[7M]**
	b)	Explain a generic process framework for software engineering activities.	**[7M]**
2		Explain the process areas required to achieve various maturity levels in CMMI.	**[14M]**
3	a)	Differentiate between functional and non-functional requirements in software engineering.	**[7M]**
	b)	Explicit effects on software requirement collection?	**[7M]**
4		Interpret the Context Models and Behavioural models.	**[14M]**
5	a)	What is design process and clarify it with respect to design engineering?	**[7M]**
	b)	Analyse the data design and architectural styles in software engineering process.	**[7M]**
6	a)	Elucidate in detail about the characteristics and criteria for a good design.	**[7M]**
	b)	Describe the design procedure for data acquisition system.	**[7M]**
7		Why is it so important to include boundary values in your black-box test data? Illustrate with examples in which a test suite developed using black box techniques might give the impression that 'everything is OK", while a test suite developed with whit box testing techniques (for example, branch coverage) might uncover a fault and vice versa.	**[14M]**
8	a)	Deliberate the procedure of formal technical reviews in testing the software.	**[7M]**
	b)	Identify the importance of the ISO 9000 quality standards in improving software quality.	**[7M]**

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(Autonomous Institution – UGC, Govt. of India)

III B.Tech I Semester Regular Examinations, December 2022

Management Information Systems

(CSE-IOT)

Roll No										

Time: 3 hours **Max. Marks: 70**

Note: This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

***

SECTION-I

1	*A*	Explain the challenges of Managing MIS.	[7M]
	B	Write the characteristics of Management Information System?	[7M]
		OR	
2	*A*	Describe the Role of MIS in Global Business.	[7M]
	B	Discuss the Nature and scope of MIS	[7M]

SECTION-II

3	*A*	What are the tools and techniques used in DSS	[7M]
	B	What are challenges in Implementation of ERP?	[7M]
		OR	
4	*A*	Discuss the concepts of Business Intelligence	[7M]
	B	Discuss the role of E Commerce.	[7M]

SECTION-III

5	*A*	Cite a case study of effectiveness if MIS.	[7M]
	B	Discuss the features of successful system implementation with suitable examples	[7M]
		OR	
6	*A*	Write a note on System Acquisition	[7M]
	B	Explain the four stage Model of information system Planning.	[7M]

SECTION-IV

7	*A*	Explain the System Development Approaches	[7M]
	B	Outline the various strategies requirement in determination	[7M]
		OR	
8	*A*	Explain the advantages and disadvantages of spiral model of system development.	[7M]
	B	Illustrate the system Development Process	[7M]

SECTION-V

9	*A*	Discuss the legal perspectives on Cyber Crime .	[7M]
	B	Explain cybercrimes along with types?	[7M]
		OR	
10	*A*	Examine the effect of Cybercrimes on Information security.	[7M]
	B	Briefly explain the Indian IT Act 2000	[7M]

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R20

Code No: R20A6904

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

III B.Tech I Semester Regular Examinations, December 2022

Wireless Sensor Networks

(CSE-IOT)

Roll No										

Time: 3 hours **Max. Marks: 70**

Note: This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

***

		SECTION-I	
1	***A***	Explain the hardware architecture of WSNs?	**[7M]**
	B	Explain about the Wireless Mesh Networks?	**[7M]**
		OR	
2	***A***	Discuss the motivation required for developing a WSNs?	**[7M]**
	B	Explain the characteristics of WSNs?	**[7M]**
		SECTION-II	
3	***A***	Explain the architectural framework of physical layer?	**[7M]**
	B	Explain about the source encoding in detail?	**[7M]**
		OR	
4	***A***	Write short notes on Channel encoding?	**[7M]**
	B	Discuss about gateways in WSNs?	**[7M]**
		SECTION-III	
5	***A***	What are the characteristics of Hybrid MAC protocols?	**[7M]**
	B	Explain about the Z-MAC protocol?	**[7M]**
		OR	
6			**[14M]**
		SECTION-IV	
7		Explain about the On-Demand routing protocol in detail?	**[14M]**
		OR	
8			
		SECTION-V	
9	***A***	Explain the characteristics of QoS Based Routing Protocols?	**[7M]**
	B	Explain about the Dynamic Power Management?	**[7M]**
		OR	
10		Explain about the Conceptual Architecture in QoS based routing protocols?	**[14M]**
		**********	

R20

Code No: R20A6904

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

III B.Tech I Semester Regular Examinations, December 2022

Wireless Sensor Networks

(CSE-IOT)

Roll No										

Time: 3 hours **Max. Marks: 70**

Note: This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

***

SECTION-I

1	***A***	Define Wireless Sensor Networks? What are the components of wireless sensor nodes?	**[7M]**
	B	Explain the applications of WSNs?	**[7M]**
		OR	
2	***A***	What are the characteristics of WSNs?	**[7M]**
	B	Explain the challenges of WSNS?	**[7M]**

SECTION-II

3	***A***	Explain the architectural framework of physical layer?	**[7M]**
	B	Write short notes on Channel encoding?	**[7M]**
		OR	
4	***A***	Explain about Optimization goals in WSNs?	**[7M]**
	B	Discuss about gateways in WSNs?	**[7M]**

SECTION-III

5	***A***	Explain about the characteristics of MAC protocols in sensor networks?	**[7M]**
	B	Explain about S-MAC protocol.	**[7M]**
		OR	
6		Explain about the IEEE 802.15.4?	**[14M]**

SECTION-IV

7	***A***	What is the importance of routing in WSNs? Explain about the various routing metrics?	**[7M]**
	B	Write short notes on Flooding and Gossiping?	**[7M]**
		OR	
8	***A***	Explain about the Hierarchical routing?	**[7M]**
	B	Differentiate Proactive and Reactive Routing Protocols?	**[7M]**

SECTION-V

9	***A***	Explain the characteristics of QoS Based Routing Protocols?	**[7M]**
	B	What factors are considered for Quality of Service?	**[7M]**
		OR	
10		Write short notes on	
		i) Power Management	**[7M]**
		ii) Local Power Management	**[7M]**

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R20

Code No: R20A6904

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

(Autonomous Institution – UGC, Govt. of India)

III B.Tech I Semester Regular Examinations, December 2022

Wireless Sensor Networks

(CSE-IOT)

Roll No										

Time: 3 hours **Max. Marks: 70**

Note: This question paper Consists of 5 Sections. Answer **FIVE** Questions, Choosing ONE Question from each SECTION and each Question carries 14 marks.

***

SECTION-I

1	***A***	Define Wireless Sensor Networks? What are the components of wireless sensor nodes?	**[7M]**
	B	Explain the applications of WSNs?	**[7M]**
		OR	
2	***A***	What are the characteristics of WSNs?	**[7M]**
	B	Explain the challenges of WSNS?	**[7M]**

SECTION-II

3	***A***	Explain the architectural framework of physical layer?	**[7M]**
	B	Write short notes on Channel encoding?	**[7M]**
		OR	
4	***A***	Explain about Optimization goals in WSNs?	**[7M]**
	B	Discuss about gateways in WSNs?	**[7M]**

SECTION-III

5	***A***	Explain about the characteristics of MAC protocols in sensor networks?	**[7M]**
	B	Explain about S-MAC protocol.	**[7M]**
		OR	
6		Explain about the IEEE 802.15.4?	**[14M]**

SECTION-IV

7	***A***	What is the importance of routing in WSNs? Explain about the various routing metrics?	**[7M]**
	B	Write short notes on Flooding and Gossiping?	**[7M]**
		OR	
8	***A***	Explain about the Hierarchical routing?	**[7M]**
	B	Differentiate Proactive and Reactive Routing Protocols?	**[7M]**

SECTION-V

9	***A***	Explain the characteristics of QoS Based Routing Protocols?	**[7M]**
	B	What factors are considered for Quality of Service?	**[7M]**
		OR	
10		Write short notes on	
		i) Power Management	**[7M]**
		ii) Local Power Management	**[7M]**

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