Hall Ticket Number :

R-17

Code: 7G161

III B.Tech. II Semester Supplementary Examinations December 2022

Data Mining & Data Warehousing

(Computer Science and Engineering)

Max. Marks: 70   Time: 3 Hours

Answer *any five full questions* by choosing one question from each unit (5x14 = 70 Marks)

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				Marks	CO	Blooms Level

UNIT–I

				Marks	CO	Blooms Level
1.	a)	Define data mining? List the applications of data mining.		4M	CO1	L1
	b)	"Data cleaning as a process". Justify		10M	CO1	L5

OR

2.		What is the need for preprocessing techniques? Summarize all the preprocessing methods		14M	CO1	L2

UNIT–II

3.	a)	Compare and contrast Star schema and Snow flake schema.		7M	CO2	L4
	b)	Categorize various kinds of Association Rules with examples.		7M	CO2	L4

OR

4.		Define a data cube. Illustrate different OLAP operations in Multidimensional Data model		14M	CO2	L2

UNIT–III

5.	a)	What is Bayes theorem? Elaborate about Bayesian Classification.		10M	CO3	L1,L6
	b)	Discuss the performance metrics used in classification.		4M	CO3	L6

OR

6.	a)	How is classification performed in data mining? Explain		6M	CO3	L1,L2
	b)	Discuss K-Nearest Neighbor classification with suitable example		8M	CO3	L2

UNIT–IV

7.	a)	Discuss about partitioning method		5M	CO4	L2
	b)	How does the BIRCH clustering work? Explain with an		9M	CO4	L1,L2

OR

8.	a)	Discuss the importance of Outlier Mining .Explain distance based Outlier Detection.		6M	CO4	L1,L2
	b)	Explain about Model based clustering methods		8M	CO4	L2

UNIT–V

9.	a)	Explain briefly about spatial data mining.		9M	CO5	L2
	b)	What is datamining ?List the applications of datamining		5M	CO5	L1

OR

10.	a)	What is a Multimedia Database? Explain the methods of Mining Multimedia Database.		9M	CO5	L1,L2
	b)	Outline the data mining applications		5M	CO5	L2

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III B.Tech. II Semester Supplementary Examinations December 2022
Internet of Things
(Computer Science and Engineering)

Max. Marks: 70   Time: 3 Hours
Answer any five full questions by choosing one question from each unit (5x14 = 70 Marks)
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UNIT–I

1. a) Describe various functional blocks of IoT.   7M
    b) Explain different Characteristics of IoT.   7M

OR

2. a) Define IoT and explain the Physical design of IoT and its protocols with help of block diagram?   7M
    b) Describe an example of IoT service that uses Publish-Subscribe communication model?   7M

UNIT–II

3. a) Which communication protocols are used for M2M local area networks?   7M
    b) What are the differences between Machines in M2M and Things inIoT?   7M

OR

4. With a neat diagram demonstrate the case study on IoT System for weather Monitoring
    System using the IoT design methodology?   14M

UNIT–III

5. a) With a neat sketch explain the architecture of 6LOWPAN?   10M
    b) List out the various benefits from 6LoWPAN?   4M

OR

6. a) What is Zigbee protocol and briefly explain the basics and applications of Zigbee
        Technology?   7M
    b) Explain the basic 6LoWPAN format with a suitable diagram.   7M

UNIT–IV

7. a) Explain the various Control Flow Statements in Python and write the difference between
        a Python module and Package?   7M
    b) Describe a use case of Python Dictionary?   7M

OR

8. a) What are variable length arguments?   7M
    b) What is the keyword argument in Python?   7M

UNIT–V

9. a) Write a Python Script for simple LED blink using Raspberry Pi?   7M
    b) What is an IoT device and explain its building blocks with neat block diagram?   7M

OR

10. a) With the help of neat diagram explain the basic building blocks of IoT device.   7M
    b) Justify how Raspberry Pi is different from a desktop computer.   7M

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III B.Tech. II Semester Supplementary Examinations December 2022
Object Oriented Analysis and Design
(Computer Science and Engineering)

Max. Marks: 70   Time: 3 Hours
Answer *any five full questions* by choosing one question from each unit (5x14 = 70 Marks)
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				Marks	CO	BL
		UNIT–I				
1.		Explain the conceptual model of the UML?		14M	CO1	L2
		OR				
2.	a)	Describe the importance of models in software development.		5M	CO1	L1
	b)	Explain briefly about the various diagrams in UML.		9M	CO1	L2
		UNIT–II				
3.	a)	What is meant by Dependency relationship? State and explain various stereotypes that apply to dependency relationship.		10M	CO2	L2
	b)	Explain the properties of a well-structured diagram.		4M	CO2	L2
		OR				
4.	a)	Draw the UML diagram to model the requirements of a system.		7M	CO2	L4
	b)	Enumerate the steps to model a context of the system.		7M	CO2	L3
		UNIT–III				
5.	a)	How are the forking and joining used in activity diagrams? Illustrate with an example.		10M	CO3	L2
	b)	What do you mean by use case realization?		4M	CO3	L1
		OR				
6.		List out the five different types of actions used by the messages in the interaction? Draw a diagram to illustrate the same?		14M	CO3	L1,L4
		UNIT–IV				
7.	a)	Explain the parts of state and transition with a diagram.		7M	CO4	L2
	b)	Define event and signal. What are the 4 kinds of events which can be modeled by UML? Explain briefly.		7M	CO4	L2
		OR				
8.		Write short notes on (i) Events and signals (ii) processes and threads (iii) state diagrams (iv) Transition and condition		14M	CO4	L1
		UNIT–V				
9.	a)	Explain briefly about the component diagrams in UML.		7M	CO5	L2
	b)	Enumerate the steps to model an embedded system. Illustrate with a UML diagram.		7M	CO5	L3
		OR				
10.	a)	Draw a class diagram showing architectural overview of the library system.		7M	CO5	L2
	b)	Distinguish between three kinds of components.		7M	CO5	L3

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III B.Tech. II Semester Supplementary Examinations December 2022
Artificial Intelligence
(Computer Science and Engineering)

Max. Marks: 70   Time: 3 Hours
Answer any five questions by choosing one question from each unit (5x14=70Marks)
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UNIT–I

1. a) Define artificial intelligence? Explain in brief about PEAS description   5M
    b) Explain in detail about the problem characteristics   9M

OR

2. a) Explain A* algorithm in detail with an example   9M
    b) Compare the performance of uninformed search strategies   5M

UNIT–II

3. a) Discuss forward chaining algorithm.   7M
    b) Illustrate unification with an example.   7M

OR

4. a) How to show that any first order logic sentence can be put into implicative
        normal form.   7M
    b) How can resolution be used to show that a sentence is
        (i) valid (ii) un-satisfiable.   7M

UNIT–III

5. Explain in detail about actions, situations and events in ontological engineering   14M

OR

6. a) Discuss logical omniscience.   7M
    b) Write the partial order planning algorithm.   7M

UNIT–IV

7. a) Explain
        i) Propositions   ii)Atomic Events   7M
    b) Discuss the method for constructing belief networks.   7M

OR

8. a) Give the axioms of Probability   7M
    b) State the Bayes rule and its usage   7M

UNIT–V

9. a) Discuss inductive learning.   7M
    b) Write the decision tree learning algorithm.   7M

OR

10. a) Describe feed forward multilayer neural networks giving details of computations 10M
    b) Discuss about applications of artificial neural networks   4M

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