Hall Ticket Number :										

R-17

Code: 7G166

III B.Tech. II Semester Supplementary Examinations February 2021

Artificial Intelligence

(Computer Science and Engineering)

Max. Marks: 70 Time: 3 Hours

Answer *all five* units by choosing one question from each unit (5 x 14 = 70 Marks)

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			Marks	CO	Blooms Level
		UNIT–I			
1.	a)	Define Artificial Intelligence? Explain its importance in modern life.	7M	1	L1
	b)	Explain the various application domains of AI	7M	1	L2
		OR			
2.		What are different types of Agents? Explain them in brief.	14M	1	L1
		UNIT–II			
3.		What is a depth first search of the search tree? Write an algorithm to conduct depth first search explain with example and also mention advantages and disadvantages.	14M	2	L1
		OR			
4.	a)	What is best first searching? Explain in detail A* algorithm.	7M	2	L1
	b)	Explain Constraint Satisfaction problem for solving a map Coloring problem	7M	2	L2
		UNIT–III			
5.		Explain in detail about forward chaining and backward chaining with an example	14M	3	L2
		OR			
6.	a)	Explain about first order logic and how it is differs from propositional logic	7M	3	L2
	b)	Explain about the unification algorithm	7M	3	L2
		UNIT–IV			
7.	a)	Describe about the categories and objects in knowledge engineering.	7M	4	L1
	b)	Explain in detail about Ontology	7M	4	L2
		OR			
8.	a)	Explain Partial Order Planning in detail.	7M	4	L2
	b)	Describe in detail about Hierarchical Planning.	7M	4	L1
		UNIT–V			
9.	a)	What is the need of acting under uncertainty in the agents	7M	5	L1
	b)	Describe in detail about Dempster-Shafer theory	7M	5	L1
		OR			
10.	a)	Briefly explain about fuzzy logic?	7M	5	L2
	b)	Describe in detail about Bayesian Theory and Bayesian Network	7M	5	L1

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Hall Ticket Number :										

R-17

Code: 7G161

III B.Tech. II Semester Supplementary Examinations February 2021

Data Mining and Data Warehousing

(Computer Science and Engineering)

Max. Marks: 70 Time: 3 Hours

Answer *all five* units by choosing one question from each unit (5 x 14 = 70 Marks)

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			Marks	CO	Blooms Level
		UNIT–I			
1.	a)	Explain briefly about various data mining functionalities.	8M	CO1	L2
	b)	"Data cleaning as a process". Justify.	6M	CO1	L5
		OR			
2.	a)	What is the need for preprocessing techniques? Summarize Data Transformation Methods.	7M	CO1	L2
	b)	Describe three challenges to data mining regarding data mining methodologies and user interaction issues.	7M	CO1	L1
		UNIT–II			
3.	a)	Briefly compare Enterprise warehouse, Data Mart, Virtual warehouse.	6M	CO2	L2
	b)	Explain how to generate frequent item sets using FP-growth algorithm.	8M	CO2	L2
		OR			
4.	a)	Define a data cube. Illustrate different OLAP operations in Multidimensional Data Model.	7M	CO2	L1
	b)	How can we mine multilevel association rules efficiently using concept hierarchies? Explain.	7M	CO2	L1
		UNIT–III			
5.	a)	Describe the measures for computing classifier accuracy.	6M	CO3	L1
	b)	Explain decision tree induction classification with an algorithm.	8M	CO3	L2
		OR			
6.	a)	Why is naïve Bayesian classification called "naïve"? Briefly outline the major ideas of naïve Bayesian classification.	8M	CO3	L2
	b)	Compare the advantages and disadvantages of eager classification versus lazy classification.	6M	CO3	L2
		UNIT–IV			
7.		Suppose that the data mining task is to cluster points (with x,y) representing location) into three clusters, where the points are A_1 (2, 10), A_2 (2, 5), A_3(8, 4), B_1(5, 8), B_2(7, 5), B_3(6, 4), C_1(1, 2), C_2(4, 9). The distance function is Euclidean distance. Suppose initially we assign A_1, B_1, and C_1 as the center of each cluster, respectively. Use the K-means algorithm to show only (i) The three cluster centers after the first round of execution. (ii) The final three clusters.	14M	CO4	L3
		OR			
8.	a)	What is cluster analysis? Describe Divisive Hierarchical method of clustering.	6M	CO4	L1
	b)	Explain about DBSCAN algorithm with a neat example.	8M	CO4	L2
		UNIT–V			
9.	a)	Explain the basic measures for text retrieval.	7M	CO5	L2
	b)	List challenges of web mining.	7M	CO5	L1
		OR			
10.	a)	What are the differences between mining association rules in multimedia databases Versus in transaction databases?	7M	CO5	L1
	b)	Explain Spatial Databases.	7M	CO5	L2

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Hall Ticket Number :										

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Code: 7G163

III B.Tech. II Semester Supplementary Examinations February 2021

Object Oriented Analysis and Design

(Computer Science and Engineering)

Max. Marks: 60 Time: 3 Hours

Answer *all five* units by choosing one question from each unit (5 x 12 = 60 Marks)

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			Marks	CO	Blooms Level
		UNIT–I			
1.	a)	Define a model. Describe the principles of modeling	5M	CO1	L-1
	b)	Explain the basic building blocks in UML.	9M	CO1	L-2
		OR			
2.	a)	Describe the importance of models in software development.	5M	CO1	L-1
	b)	Explain briefly about the various diagrams in UML.	9M	CO1	L-2
		UNIT–II			
3.	a)	Draw and explain the class diagram for ATM bank system.	7M	CO2	L-3
	b)	Enumerate the steps to model a context of the system.	7M	CO2	L-3
		OR			
4.	a)	Explain the properties of a well-structured diagram.	5M	CO2	L-2
	b)	Draw the class diagram for school information system.	9M	CO2	L-3
		UNIT–III			
5.	a)	Explain the following illustrating interaction diagrams. i) Focus of control ii) Object line iii) Path iv) Dewey Decimal Numbering	7M	CO3	L-1
	b)	How are the forking and joining used in activity diagrams? Illustrate with an example.	7M	CO3	L-2
		OR			
6.	a)	Consider an automated cool drink rendering machine. Draw a sequence diagram for the “Buy Soda” use case. Explain.	7M	CO3	L-3
	b)	Enumerate the steps to model the flows of control by time ordering.	7M	CO3	L-3
		UNIT–IV			
7.	a)	Define event and signal. What are the 4 kinds of events which can be modeled by UML? Explain briefly.	7M	CO4	L-2
	b)	Differentiate between a process and a thread? How are they represented in UML?	7M	CO4	L-4
		OR			
8.	a)	Explain the parts of state and transition with a diagram.	7M	CO4	L-2
	b)	Compare sub states, nested states, composite states. Represent with suitable diagrams.	7M	CO4	L-4
		UNIT–V			
9.	a)	Explain briefly about the component diagrams in UML.	7M	CO5	L-2
	b)	Build the steps to model an executable release. Illustrate with a UML diagram.	7M	CO5	L-2
		OR			
10.	a)	Differentiate components and classes. How are components and interfaces interrelated?	7M	CO5	L-4
	b)	Enumerate the steps to model an embedded system. Illustrate with a UML diagram.	7M	CO5	L-3

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