Hall Ticket Number :										

R-17

Code: 7G166

III B.Tech. II Semester Regular Examinations Nov/Dec 2020

Artificial Intelligence

(Computer Science and Engineering)

Max. Marks: 70 Time: 3 Hours

Answer *any five* questions from the following (5 x 14 = 70 Marks)

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			Marks	CO	Blooms Level
1.	a)	What are the basic components of AI problem solving methodology? Describe them in detail. Illustrate with an example.	7M	1	L1
	b)	Explain the conversion method of basic agent to learning agents.	7M	1	L2
2.		Explain state space approach for solving any AI problem	14M	1	L2
3.		Explain Informed search strategies with an example	14M	2	L2
4.	a)	Illustrate the use of first order logic to represent knowledge	7M	3	L2
	b)	outline the operation of the unification algorithm on each of the following pairs of literals: i) f(Marcus) and f(Caesar) ii) f(x) and f(g(y)) iii) f(Marcus, g(x, y)) and f(x, g(Caesar, Marcus)).	7M	3	L2
5.	a)	Explain about propositional logic and how it is useful to AI.	7M	3	L2
	b)	Write about resolution.	7M	3	L1
6.	a)	Give an outline of a simple planning agent	7M	4	L2
	b)	Write short notes on Conditional Planning.	7M	4	L2
7.		Explain the Baye's rule and its use in uncertain knowledge and reasoning?	14M	5	L2
8.		Explain Inference Using Full Joint Distributions	14M	5	L2

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Code: 7G162

III B.Tech. II Semester Regular Examinations Nov/Dec 2020

Internet of Things

(Computer Science and Engineering)

Max. Marks: 70 Time: 3 Hours

Answer *any five* questions from the following (5 x 14 = 70 Marks)

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			Marks	CO	Blooms Level
1.	a)	Explain four communication models and communication APIs of IoT with suitable diagrams.	8M	CO1	L2
	b)	Design Smart pollution monitoring application with a level 2 deployment diagram.	6M	CO1	L3
2.	a)	Write about IoT enabling technologies in detail.	6M	CO1	L3
	b)	Explain any two applications of Home Automation with the corresponding IoT level diagrams.	8M	CO1	L3
3.		Demonstrate the process of IoT design methodology for weather monitoring application.	14M	CO2	L3
4.	a)	With a neat sketch explain about Wireless RFID Infrastructure?	10M	CO3	L2
	b)	List and explain any 2 applications of 6LoWPAN	4M	CO3	L2
5.	a)	Explain about Zigbee Compact Application Protocol Stack (CAP) with a suitable diagram?	4M	CO3	L3
	b)	Differentiate between IPv6 Protocol stack and 6LoWPAN Protocol stack.	10M	CO3	L2
6.	a)	Write a short note on the following features in python. i) Tuples ii) Lists iii) Dictionary	7M	CO4	L2
	b)	Write a Python program to compute statistics of a document with the following properties: i) Create a text file with random text ii) Create a function to read the contents of a file in reverse order.	7M	CO4	L4
7.	a)	Discuss about various interfaces of Raspberry Pi.	7M	CO5	L2
	b)	How Raspberry Pi differs with Arduino.	7M	CO5	L3
8.	a)	Write a python script to interface LED and switch with Raspberry Pi.	7M	CO5	L4
	b)	Write a short note on IoT devices other than Raspberry pi.	7M	CO5	L2

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R-17

Code: 7G163

III B.Tech. II Semester Regular Examinations Nov/Dec 2020

Object Oriented Analysis and Design

(Computer Science and Engineering)

Max. Marks: 60 Time: 3 Hours

Answer *any five* questions from the following (5 x 14 = 70 Marks)

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			Marks	CO	Blooms Level
1.	a)	What is the UML approach to software development life cycle? Explain the various phases.	7M	CO1	L-1
	b)	Define software Architecture. Explain the five interlocking view model of system architecture.	7M	CO1	L-1
2.	a)	Why is it necessary to have a variety of diagrams in a model of a system?	4M	CO1	L-1
	b)	Explain briefly about the UML diagrams which can be used to model the behavioral aspects of a system.	10M	CO1	L-2
3.	a)	What is meant by Dependency relationship? State and explain various stereotypes that apply to dependency relationship.	9M	CO2	L-2
	b)	Model the logical database schema with a class diagram.	5M	CO2	L-3
4.	a)	With reference to class diagrams, enumerate the steps to forward engineer.	7M	CO2	L-3
	b)	Draw the UML diagram to model the requirements of a system.	7M	CO2	L-3
5.	a)	Explain the following standard stereotypes that adorn the ends of links: i) association ii) self iii) global iv) local v) parameter	7M	CO3	L-2
	b)	Draw the use case diagram for Unified Library application. Explain.	7M	CO3	L-3
6.	a)	What are the four kinds of events which can be modeled by UML? Explain.	7M	CO4	L-2
	b)	What are the various parts of a state? Explain briefly. Enumerate the steps to model time.	7M	CO4	L-2
7.	a)	Differentiate between a process and a thread? How are they represented in UML	6M	CO4	L-4
	b)	Draw the state chart diagram of a Hospital Information system.	8M	CO4	L-3
8.	a)	Differentiate nodes and components	5M	CO5	L-4
	b)	What is a component? How to model a component diagram? Explain with an example.	9M	CO5	L-3

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R-17

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III B.Tech. II Semester Regular Examinations Nov/Dec 2020

Software Testing Methodologies

(Computer Science and Engineering)

Max. Marks: 70 Time: 3 Hours

Answer *any five* questions from the following (5 x 14 = 70 Marks)

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			Marks	CO	Blooms Level
1.	a)	Explain different types of consequences of bugs in detail.	7M	CO1	L2
	b)	What are the Phases in a Tester's Mental Life	7M	CO1	L1
2.		Discuss on how loops are tested in detailed fashion	14M	CO2	L2
3.	a)	What is test blindness? Discuss in detail	7M	CO2	L2
	b)	Elaborate on path sensitization with an example.	7M	CO2	L3
4.		Explain in detail about nice domain and ugly domain	14M	CO3	L3
5.	a)	Discuss on Data-Flow Anomaly State Graph	7M	CO3	L2
	b)	Explain the following in detail i. All-du-paths strategy ii. All-Uses Strategy	7M	CO3	L2
6.	a)	Discuss on the concepts of paths and path products with examples	7M	CO4	L3
	b)	Explain the reduction procedure to convert into path expression	7M	CO4	L2
7.	a)	How to calculate the Approximate Minimum Number of Paths	7M	CO4	L1
	b)	Discuss briefly about path sum and path product	7M	CO4	L2
8.		Explain in detail on the following a. Node reduction algorithm b. Matrix of a graph	14M	CO5	L2

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