C **Reg. No. :** | | | | | | | | | | |

Question Paper Code: 59424

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2019

Elective

Electronics and Communication Engineering

15UEC924- ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING

(Regulation 2015)

Duration: Three hours Maximum: 100 Marks

PART A - (5 x 1 = 5 Marks)

1. The main task of a problem-solving agent is CO1-R

   (a) Solve the given problem and reach to goal

   (b) To find out which sequence of action will get it to the goal state

   (c) All of the mentioned

   (d) None of the mentioned

2. Which value is assigned to alpha and beta in the alpha-beta pruning? CO2-R

   (a) Alpha = max (b) Beta = min

   (c) Beta = max (d) Both Alpha = max & Beta = min

3. Which of the following is not the style of inference? CO3-R

   (a) Forward Chaining (b) Backward Chaining

   (c) Resolution Refutation (d) Modus Ponen

4. Which modifies the performance element so that it makes better decision? CO4-R

   (a) Performance element (b) Changing element

   (c) Learning element (d) None of the mentioned

5. How many things are present in conventional communication signs? CO5-U

   (a) 3 (b) 4 (c) 5 (d) 6

PART – B (5 x 3= 15Marks)

6.	Mention the components of learning agent.	CO1- R	
7.	What is hill climbing algorithm?	CO2- R	
8.	List out the advantages of forward chaining algorithm.	CO3- R	
9.	Give the general form of EM algorithm.	CO4- R	
10.	Define disambiguation.	CO5- R	

PART – C (5 x 16= 80Marks)

11.	(a)	What are the four basic types of agent program in any intelligent system? Explain how it converts them into learning agents?	CO1- U	(16)
		Or		
	(b)	How searching is used to provide solutions and also describe some real world problems?	CO1 -App	(16)
12.	(a)	Write in detail about any two informed search strategies.	CO2- U	(16)
		Or		
	(b)	Describe Alpha-Beta pruning and its effectiveness.	CO2- U	(16)
13.	(a)	Explain the various steps associated with the knowledge engineering process with suitable example.	CO3- U	(16)
		Or		
	(b)	Discuss in detail about Backward chaining.	CO3- U	(16)
14.	(a)	Describe in detail about learning decision trees with example.	CO4 -U	(16)
		Or		
	(b)	Explain in detail about passive reinforcement learning.	CO4- R	(16)
15.	(a)	Describe in detail about the Syntactic Analysis (PARSING).	CO5- U	(16)
		Or		
	(b)	Explain the machine translation system with a neat sketch. Analyze its learning probabilities.	CO5- U	(16)