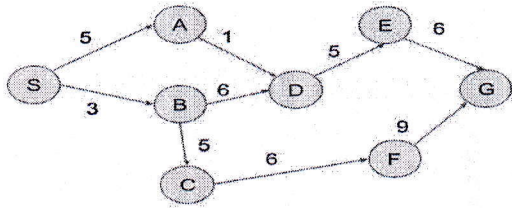


MCA DEGREE FIFTH SEMESTER EXAMINATION, JANUARY 2022
19-381-0501 APPLIED ARTIFICIAL INTELLIGENCE
(Regular)

Time: 3 Hours

Maximum Marks: 50

(Answer ANY FIVE questions)
(All questions carry EQUAL marks)

	QUESTIONS	Marks	CO	BL	PI
1	(a) Define Artificial intelligence?	2	CO1	L1	1.6.1
	(a) Consider the following Knowledge Base: The humidity is high or the sky is cloudy. If the sky is cloudy, then it will rain. If the humidity is high, then it is hot. It is not hot. Goal: It will rain. Use propositional logic and apply resolution method to prove that the goal is derivable from the given knowledge base.	8	CO2	L3	1.7.1
2.	Explain different types of environments in AI with examples.	10	CO5	L2	1.6.1
3.	Describe different types of agent architectures with diagrams.	10	CO5	L2	1.6.1
4.	(a) Find the path to reach from S to G using DFS algorithm. 	7	CO3	L3	1.7.1
	(b) Analyse the time and space complexity of the DFS algorithm.	3	CO3	L3	2.5.1

5.	(a) What are the improvements of Alpha-Beta pruning over native minimax algorithm?	3	CO4	L2	1.7.1
	(b) Find the path to reach from S to G using A* search.	7	CO3	L3	1.7.1
<pre> graph LR S((S h=7)) -- 3 --> A((A h=9)) S -- 2 --> D((D h=5)) A -- 5 --> B((B h=4)) B -- 2 --> C((C h=2)) B -- 1 --> E((E h=3)) D -- 4 --> E C -- 4 --> G((G h=0)) E -- 3 --> G S -- 10 --> B </pre>					
6.	Explain in detail about Information retrieval and its importance in Natural Language Processing.	10	CO7	L2	1.7.1
7.	Explain the Edge detection technique in Image Processing.	10	CO6	L2	1.7.1
