

Reg. No.:

Name :



**VIT**<sup>®</sup>  
**BHOPAL**  
www.vitbhopal.ac.in

**Mid-Term Examinations – October 2021**

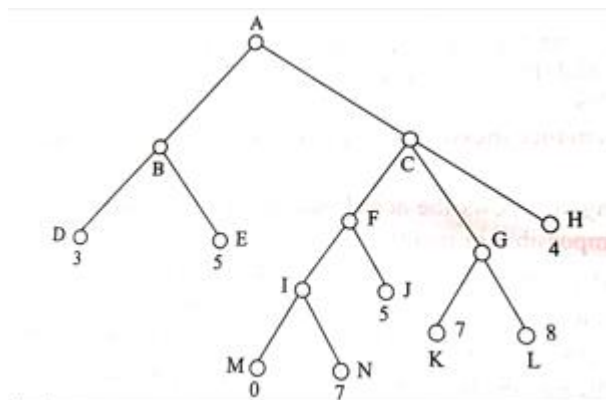
Programme	: <b>B.Tech.</b>	Semester	: <b>Fall 2021-22</b>
Course	: <b>FUNDAMENTALS IN AI and ML</b>	Code	: <b>CSA2001</b>
Faculty	: <b>Dr. Rakhi</b>	Slot/ Class No.	: <b>D11+D12+D13/0048</b>
Time	: <b>1 ½ hours</b>	Max. Marks	: <b>50</b>

**Answer all the Questions**

Q.No.	Sub. Sec.	Question Description	Marks
1	(i)	Explain various task Environment in the Agent Architecture with the help of suitable example.	6
	(ii)	Write the PEAS Sequence for the following: a. Practicing tennis against a wall. b. Bidding on an item at an auction.	4
2	(a)	What are Intelligent Agents? State with the Help of Suitable Diagram and example.	5
	(b)	Explain the Water-Jug Problem (4 unit Jug and 3 Unit Jug). How you can solve it for exactly 2 units of water in any of the Jug.	5
3		What are Constraint satisfaction Problems? Use Constraint satisfaction Approach to solve the following Crypto arithmetic problem: (Hint: O=4)	10

**YOUR + YOU = HEART**

4 Perform Min-Max strategy to find the values of nodes from A,B,C,F,G and I. Also find out which nodes will be pruned using Alpha-Beta Pruning. (Assume First move at Node A as MAX move)



10

- 5 The following statements are given:
- a) Rishi likes to eat peanut
  - b) Rishi eats whatever John eats
  - c) John eats only eatables
  - d) Any body who eats eatables is a human being
  - e) Peanut is an eatable.
- 10**

Convert the above statements into WFF and clausal form. And also answer the question "Is john a human being" using resolution

⇔⇔⇔