



		Reg. No.:	
		Name :	
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Mid-Term Examinations – April 2023			
Programme	: B.Tech	Semester	: Summer 2022-23
Course	: Fundamentals in AI & ML / CSA2001	Slot/ Class No.	: C11+C12+C13
Time	: 1 ½ hours	Max. Marks	: 50

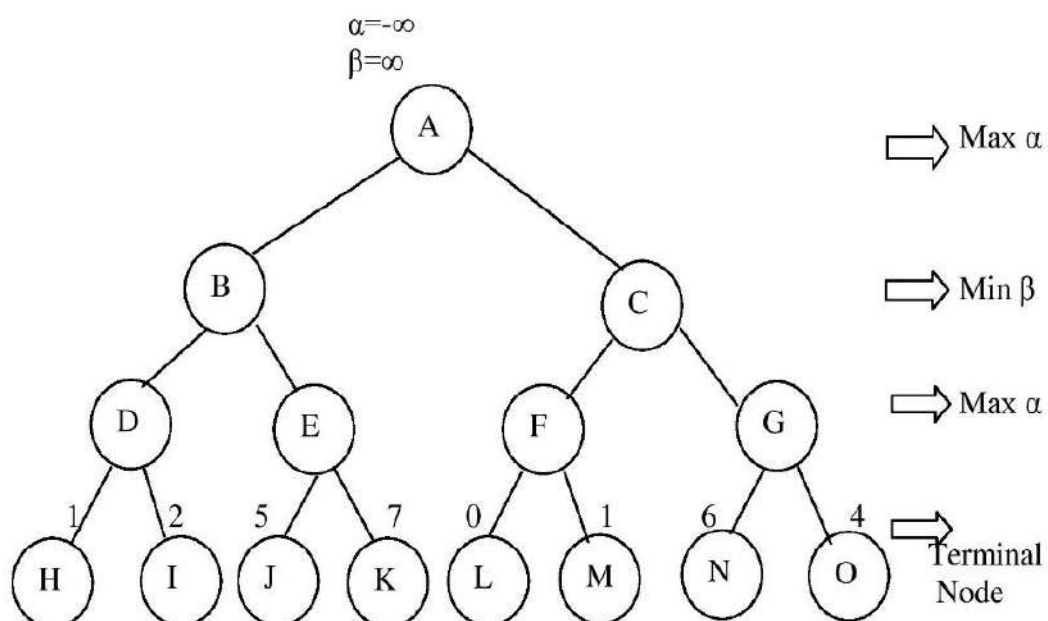
Answer all the Questions

Q.No.	Sub. Sec.	Question Description	Marks
1		What is A.I. technique and discuss its characteristics? Analyze the different problems where A.I. problems are solved by using non A.I. technique?	10
2	(a)	Find the state space representation of 8-puzzle problem.	5
	(b)	In the game shown below, six moves have been made. Mark plays with crosses (X) and Mac plays with circles (O). However, you do not know who started the game. Who will win the game?	

O	O	
O	X	
X	X	

5

- 3 Apply Alpha-Beta pruning to the following tree:



10

- 4 Analyze the algorithm for Forward Chaining, Backward Chaining with the given example-
Rule 1: If A and C then F,
Rule 2: If A and E then G, **10**
Rule 3: If B then E,
Rule 4: If G then D prove If A and B true then D

- 5 Consider the following sentences:
i. If X is on top of y then y supports X
ii. If X is above y and they are touching each other then x is on top of y.
iii. A cup is above a book.
iv. A cup is touching a book. **10**

Translate these statements in predicate logic. Prove by backward reasoning “Book Support Cup”.

