

B.M.S. COLLEGE FOR WOMEN
BENGALURU – 560004

V SEMESTER END EXAMINATION – JAN/FEB-2024

B.C.A. - ARTIFICIAL INTELLIGENCE
(NEP Scheme 2021-22onwards)

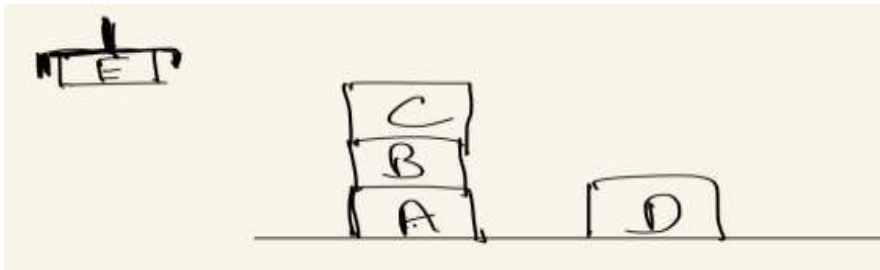
Course Code: BCA5DSC13
Duration: 2 ½ Hours

QP Code: 5045
Max. Marks: 60

I. Answer any TEN Questions.

(10X2=20)

1. What are the two types of robot kinematics?
2. Justify the statement “We need probabilistic reasoning in AI”?
3. Expand ANN, CNN, RNN, and LSTM.
4. Is Decision tree prone to Overfitting?
5. Mention applications of ANN?
6. What are some real-world applications of fuzzy logic?
7. List the steps in Means End Analysis.
8. Define AI.
9. Which according to you is the best AI approach “Think humanely or Think rationally”.
Justify.
10. What are the uses of KB in AI.
11. Write state representation for the below Block World.



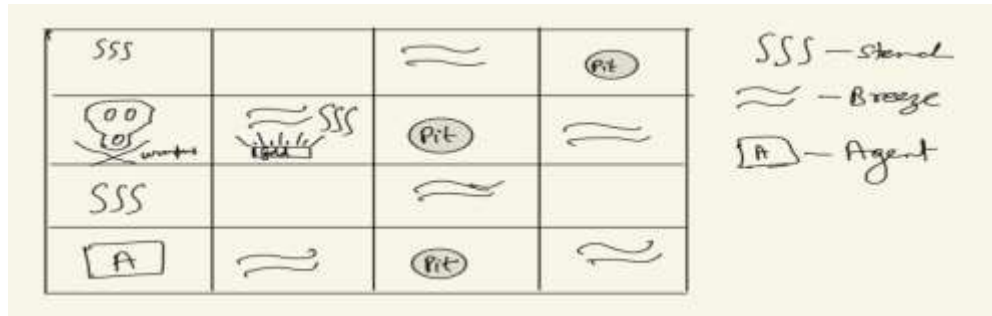
12. Differentiate between forward chaining and backward chaining.

II. Answer any SIX questions.

(6X5=30)

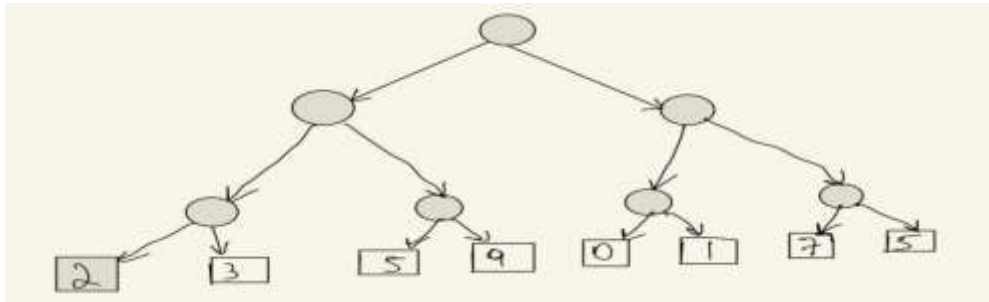
13. Explain different phases of image processing.
14. With a neat diagram describe the components of Expert System. Explain any one expert system that is currently in use and How does it interest you?
15. Convert the following statements to first order predicate logic.
 - a) Rama loves everyone.
 - b) Every student smiles
 - c) Every student who walks talks
 - d) Not all students like both Mathematics and Science.
 - e) Every man respects his parent.

16. Solve the below Wumpus world problem.

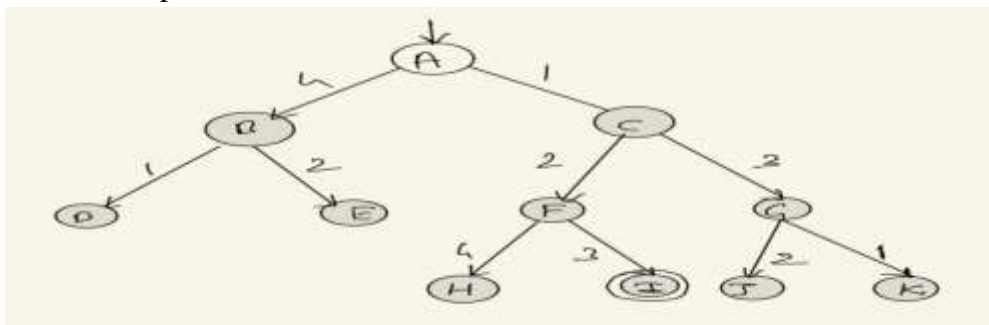


17. Write Minimax search algorithm.

18. Assume two players are playing a chess game, for the below given moves which is the best move that would do the most damage to one of the player with minimum possible comparison.



19. Solve the below problem for Best First search.



20. Write a short note on the following:

- Uninformed search
- Pragmatic Processing

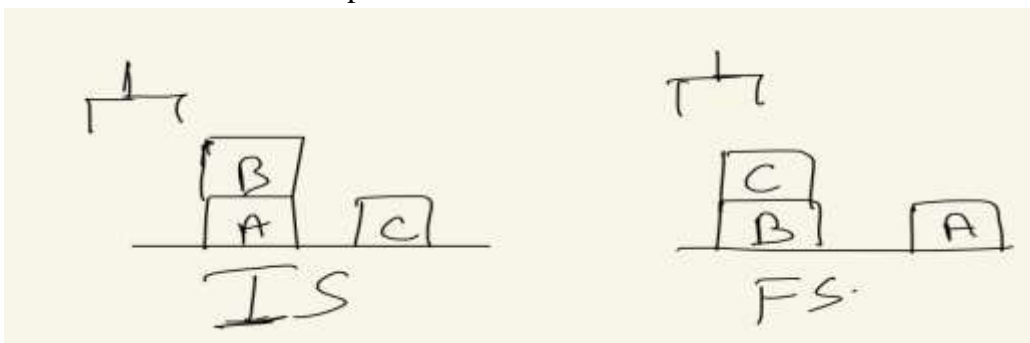
III. Answer any ONE of the following.

(1X10=10)

21. Explain different types of Agents.

22. How many types of machine learning are there? Explain different categories of supervised machine learning algorithm along with their most popular algorithms with an example.

23. Solve the below Block World problem:



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