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Fifth Semester B.E. Degree Examination, June/July 2023 Principles of Artificial Intelligence

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing one full question from each module.

Module-1

- 1 a. Explain brief history of artificial intelligence. (10 Marks)
b. Explain Intelligent systems in AI. (10 Marks)

OR

- 2 a. Explain current trends and development of AI. (10 Marks)
b. Describe water Jug problem with production rules and give solution. (10 Marks)

Module-2

- 3 a. Explain two player perfect information games. (10 Marks)
b. Explain alphabeta pruning with example. (10 Marks)

OR

- 4 a. Explain Iterative deepening. (05 Marks)
b. Write the algorithm for MINIMAX. (10 Marks)
c. List the properties of $\alpha - \beta$ pruning. (05 Marks)

Module-3

- 5 a. Write the algorithm for conversion to clause form with example. (10 Marks)
b. Write the propositional resolution algorithm with example. (10 Marks)

OR

- 6 a. Write the resolution algorithm for predicate logic with example. (10 Marks)
b. Explain semantic tableau system. (10 Marks)

Module-4

- 7 a. Explain non linear planning strategies. (10 Marks)
b. Explain block world problem. (10 Marks)

OR

- 8 a. Explain the types of planning system. (10 Marks)
b. Explain means end analysis with example. (10 Marks)

Module-5

- 9 a. Explain the property inheritance algorithm. (08 Marks)
b. Explain simple relation knowledge and procedural knowledge using example. (12 Marks)

OR

- 10 a. Explain 4 approaches to knowledge representation. (12 Marks)
b. Explain expert systems. (08 Marks)

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