

Fifth Semester B.E. Degree Examination, Dec.2017/Jan.2018 Artificial Intelligence

Time: 3 hrs.

Max. Marks: 80

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

Module-1

- 1 a. State the algorithm for steepest ascent hill climbing along with its disadvantages. (06 Marks)
- b. Solve the following cryptarithmic problem: SEND + MORE = MONEY. (10 Marks)

OR

- 2 a. Define Artificial Intelligence, and list the task domains of artificial intelligence. (04 Marks)
- b. Explain four categories of production system. (04 Marks)
- c. Explain problem characteristics with respect to heuristic search. (08 Marks)

Module-2

- 3 a. Explain the frame problem. (06 Marks)
- b. Write the algorithm for conversion to clause form. (10 Marks)

OR

- 4 a. Define Horn clause and give the syntactic difference between PROLOG and logic. (04 Marks)
- b. Write the algorithm to unify (L_1, L_2). (06 Marks)
- c. Write a note on conflict resolution. (06 Marks)

Module-3

- 5 a. Define Frame. State the bayes theorem and explain the notations used. (06 Marks)
- b. Write a note on Justification based Truth Maintenance System (JTMS). (10 Marks)

OR

- 6 a. Write a note on closed world assumption. (06 Marks)
- b. Explain Bayesian network. (10 Marks)

Module-4

- 7 a. Define conceptual dependency, mention its goals along with representation. (06 Marks)
- b. Write the algorithm for minimax (position, depth, players) and explain. (10 Marks)

OR

- 8 a. Write the algorithm for
i) Depth first iterative deepening ii) Iterative deepening - A* (06 Marks)
- b. Write a note on global ontology. (10 Marks)

Module-5

- 9 a. Explain classification of spell checking techniques. (06 Marks)
- b. Explain knowledge acquisition. (10 Marks)

OR

- 10 a. Briefly explain four ways of handling sentences. (04 Marks)
- b. Write a note on decision trees. (06 Marks)
- c. Write the algorithm for candidate elimination. (06 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.