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15CS562

Fifth Semester B.E. Degree Examination, Dec.2023/Jan.2024
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. What is AI technique? List less desirable properties and representation of knowledge. **(08 Marks)**

   b. Explain production system with components and characteristics. List the requirement of good control strategies. **(08 Marks)**

OR

2   a. List and explain the AI problem characteristics. **(08 Marks)**

   b. Explain constraint satisfaction and solve the cryptarithmetic problem :
   CROSS + ROADS = DANGER. **(08 Marks)**

Module-2

3   a. Explain the approaches to knowledge representation. **(10 Marks)**

   b. Write a note on control knowledge. **(06 Marks)**

OR

4   a. State the algorithm to Unify (L_1, L_2). **(06 Marks)**

   b. Write the algorithm for conversion to clause form. **(10 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. Explain conceptual dependency along with its goals and representation. **(08 Marks)**

   b. Give the reasons to build large databases. **(04 Marks)**

   c. Write a note on iterative deepening. **(04 Marks)**

OR

8   a. Write a note on global ontology. **(10 Marks)**

   b. Explain Minimax search procedure. **(06 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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