CBCS SCHEME

USN | | | | | | | | | | 15CS562

Fifth Semester B.E. Degree Examination, Feb./Mar. 2022
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 Artificial Intelligence? List the task domains of Artificial Intelligence.   (06 Marks)
    b. Explain Means – Ends Analysis with an example.   (06 Marks)
    c. Explain Production System.   (04 Marks)

OR

2   a. Write a note on Water Jug Problem using Production Rules.   (08 Marks)
    b. Explain how AND – OR graphs are used in Problem reduction.   (04 Marks)
    c. Explain Depth – First search algorithm with an example.   (04 Marks)

Module-2

3   a. Explain the approaches to Knowledge representation.   (10 Marks)
    b. Distinguish Forward and Backward reasoning. Explain with example.   (06 Marks)

OR

4   a. Write the Algorithm for conversion to clause form.   (10 Marks)
    b. Write a Resolution algorithm for Predicate logic.   (06 Marks)

Module-3

5   a. Define Baye's theorem.   (06 Marks)
    b. Explain Dempster – Shafer theory with example.   (06 Marks)
    c. Briefly explain the motivation for Fuzzy logic.   (04 Marks)

OR

6   a. Explain Bayesian Networks.   (06 Marks)
    b. Define Semantic network with an example.   (04 Marks)
    c. Explain Non-Monotonic logic and Default logic with example. Which are the two common kinds of Non-monotonic reasoning defined in these logics?   (06 Marks)

Module-4

7   a. Explain the Conceptual dependency representation of an event or action.   (08 Marks)
    b. What is Script? Write a script for ordering scene in Restaurant.   (08 Marks)

OR

8   a. Explain MINMAX Search procedure.   (08 Marks)
    b. Write a note on Iterative deepening.   (04 Marks)
    c. Give the reasons to build large databases.   (04 Marks)

Module-5

9   a. What is Natural Language Processing? Explain the steps in process.   (08 Marks)
    b. Explain Candidate Elimination Algorithm, with example.   (08 Marks)

OR

10   a. Explain Knowledge Acquisition.   (08 Marks)
     b. Discuss the Spell Checking Techniques.   (08 Marks)

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