

CBCS SCHEME

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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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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.