15CS/IS562

USN ☐☐☐☐☐☐☐☐☐☐

Fifth Semester B.E. Degree Examination, Jan./Feb. 2021
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 an AI technique? Explain in terms of knowledge representation. (05 Marks)
   b. Distinguish Breadth-First search and Depth First search. (06 Marks)
   c. Write an algorithm for simple Hill climbing. (05 Marks)

OR

2 a. On what dimensions problems are analyzed? (08 Marks)
   b. Mention issues in design of search problem. (03 Marks)
   c. Write a note on constraint satisfaction. (05 Marks)

Module-2

3 a. Explain and illustrate unification algorithm. (06 Marks)
   b. What are the properties of a good system for the representation of knowledge? (04 Marks)
   c. Discuss how forward reasoning is different from backward reasoning. (06 Marks)

OR

4 a. With an illustration explain the process of converting well formed formulas to clause form. (08 Marks)
   b. Write a note on : i) Conflict resolution   ii) Logic programming. (08 Marks)

Module-3

5 a. With an example, explain semantic networks. (05 Marks)
   b. What is nonmontonic reasoning? Describe logics for montonic reasoning. (05 Marks)
   c. Which are the key issues to be addressed in nonmonotonic reasoning system? (06 Marks)

OR

6 a. Desrcribe the implementation issues of nonmontonic reasoning system. (05 Marks)
   b. Write a note on Baysean networks. (05 Marks)
   c. Explain a simplified frame system with an example. (06 Marks)

Module-4

7 a. Why we should build a large knowledge base? (04 Marks)
   b. Write the algorithm for MINIMAX. (08 Marks)
   c. What is iterative deepening? (04 Marks)

OR

8 a. Explain the different dependencies of Conceptual Dependency. (10 Marks)
   b. Write a note on Global Ontology. (06 Marks)

Module-5

9 a. Enlist and explain different components of natural language understanding process. (08 Marks)
   b. How can a program get better without the aid of a teacher? (08 Marks)

OR

10 a. Write a note on Analogy. (05 Marks)
    b. Which are the capabilities of expert systems? (04 Marks)
    c. Distinguish semantic and ease grammers. (07 Marks)

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