15CS562

Fifth Semester B.E. Degree Examination, Dec.2018/Jan.2019
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. Define Artificial Intelligence and list the task domains of Artificial Intelligence. **(06 Marks)**
b. State and explain algorithm for Best First Search 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 simulated annealing. **(04 Marks)**
c. Explain problem reduction with respect to AND-OR graphs. **(04 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. Explain Justification based Truth Maintenance System (TMS) with an example. **(08 Marks)**
b. Write a note on Non-Monotonic logic and default logic. **(04 Marks)**
c. Explain abduction and inheritance. **(04 Marks)**

OR

6 a. Write a note on Dempster Shafer theory. **(08 Marks)**
b. Define semantic network with an example. **(04 Marks)**
c. State Baye's theorem. **(04 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. Define learning and give the difference between neural net learning and genetic learning. **(06 Marks)**
b. Write a note on Knowledge acquisition. **(06 Marks)**
c. Explain Rote learning. **(04 Marks)**

OR

10 a. Explain the five phases of natural language processing. **(10 Marks)**
b. Explain spell checking techniques. **(06 Marks)**