CBCS SCHEME

USN [ ][ ][ ][ ][ ][ ][ ][ ][ ][ ]   18SCS252

Second Semester M.Tech. Degree Examination, June/July 2019
Trends in Artificial Intelligence and Soft Computing

Time: 3 hrs.   Max. Marks: 100

Note: *Answer FIVE full questions, choosing*
ONE full question from each module.

Module-1

1   a.   Define Artificial Intelligence. List the different approaches to AI and illustrate the different task domains of artificial intelligence. **(10 Marks)**
    b.   Explain different types of Agents. **(10 Marks)**

OR

2   a.   What are Agents? Explain the desirable properties of agents with example of Agents. **(10 Marks)**
    b.   Explain and Demonstrate the unification algorithm to solve satisfiability problem. **(10 Marks)**

Module-2

3   a.   What are the fundamental problems of logic? Explain with example. **(10 Marks)**
    b.   List and explain the properties of good knowledge base system. **(10 Marks)**

OR

4   a.   Demonstrate the problem decomposition using AND-OR graphs. **(10 Marks)**
    b.   Discuss different knowledge represented schemes. **(10 Marks)**

Module-3

5   a.   Demonstrate the water jugs problems with state space graph. **(10 Marks)**
    b.   Discus how Heuristic methods are used in 8-puzzle problem and Tic-tac toe problem. **(10 Marks)**

OR

6   a.   Illustrate working of Best - first search to obtain the low cost solution with example and Algorithm. **(10 Marks)**
    b.   Explain the important types of Hierarchical planning technique in detail. **(10 Marks)**

Module-4

7   a.   Explain the set and Fuzzy operators in brief. **(10 Marks)**
    b.   Explain fuzzy Relations with their membership matrices. **(04 Marks)**
    c.   Describe the properties of fuzzy relations with one problem and its solution for each property. **(06 Marks)**

OR

8   a.   Demonstrate Fuzzy system and design, with its architecture. **(06 Marks)**
    b.   Explain Linguistic Hedges. **(04 Marks)**
    c.   Discuss the different Defuzzification methods. **(10 Marks)**

Module-5

9   a.   Explain the advancement of AI and the expert system with its structure. **(10 Marks)**
    b.   Explain the characteristics of expert system and Advantages of expert system. **(10 Marks)**

OR

10 a.   Discuss the production system with its components. **(04 Marks)**
    b.   Discuss the Advantages and disadvantages of production system. **(06 Marks)**
    c.   Briefly explain Artificial Neural Network, with its Architecture. **(10 Marks)**

* * * * *