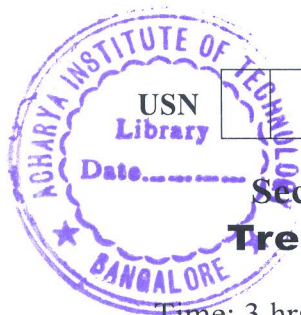


CBCS SCHEME



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. Discuss 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)

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.