

B. TECH. (COMPUTER SCIENCE & BUSINESS SYSTEMS) (CBCS - 2018 COURSE)
B.Tech. (CSBS) Sem - VI :SUMMER- 2022
SUBJECT : ARTIFICIAL INTELLIGENCE

Day : Friday
Date : 17-06-2022

S-20471-2022

Time : 02:30 PM-05:30 PM
Max. Marks : 60

N.B.

- 1) All questions are **COMPULSORY**.
 - 2) Figures to the **RIGHT** indicate **FULL** marks.
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Q.1 What is Intelligent Agent? Explain in detail applications of Artificial Intelligent. (10)

OR

Q.1 Define Agents in Artificial Intelligence. Explain Utility based agent and Learning agent in Artificial Intelligence. (10)

Q.2 What is Hill climbing search algorithm? Explain with an example. (10)

OR

Q.2 Explain simulated annealing search and local beam search Algorithm. (10)

Q.3 Explain Mini-Max Algorithm with example in Artificial Intelligence. (10)

OR

Q.3 Define game with respect to Initial state, Player, Action, Result, Terminal-Test and Utility. Draw Tic-Tac-Toe game tree and explain how to determine optimal strategy in game. (10)

Q.4 Write difference between : (10)

- a) Procedural knowledge versus Declarative knowledge.
- b) Forward reasoning versus backward reasoning.

OR

Q.4 Explain concept of First-Order Logic in Artificial Intelligence. Write down logical representations for the following sentences. (10)

- a. Horses, cows and pigs are mammals.
- b. An offspring of a horse is a horse.
- c. Bluebeard is a horse.
- d. Bluebeard is Charlie's parent.
- e. Every mammal has a parent.

Q.5 What are the components of planning system? Explain Hierarchical planning. (10)

OR

Q.5 Discuss in detail representing knowledge in an uncertain domain. (10)

Q.6 List Experts Systems Examples. Discuss in detail expert system shells. (10)

OR

Q.6 What is an Expert System? Explain in detail Components of Expert System. (10)
