

Roll No.

Total No. of Pages : 02

Total No. of Questions : 09

B.Voc. (Software Development) (Sem.-6)

INTRODUCTION TO AI

Subject Code : 7.GV.05

M.Code : 91655

Date of Examination : 04-07-22

Time : 3 Hrs.

Max. Marks : 30

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying ONE marks each.**
2. **SECTION-B contains FIVE questions carrying TWO & HALF marks each and students have to attempt any FOUR questions.**
3. **SECTION-C contains THREE questions carrying FIVE marks each and students have to attempt any TWO questions.**

SECTION-A

1. Write briefly :

- a. What is Artificial Intelligence? Differentiate between strong AI and weak AI.
- b. Discuss the issues in knowledge representation.
- c. Represent the following facts in predicate logic.
 - i. The members of the Elm St? Bridge Club are Joe, Sally, Bill and Ellen.
 - ii. Joe is married to Sally.
- d. Define expert system with the help of a block diagram.
- e. What do you mean by lexical ambiguity in natural language processing? Give an example.
- f. Differentiate between informed and uninformed search strategies. Give examples.
- g. What are the advantages and disadvantages of rote learning?
- h. State the characteristics of an intelligent agent with the help of an example.
- i. What is a tautology? Give example.
- j. List the important features of LISP.

SECTION-B

2. What are the different approaches in defining artificial intelligence? List and discuss two potentially negative effects on society of the development of artificial intelligence
3. What is a production system in artificial intelligence? There are two jugs of capacity 5 liter and 3 liter, and a tap with an endless supply of water. The objective is to obtain 4 liters exactly in the 5-liter jug with the minimum steps possible. State this water jug problem as a production system.
4. What are the various types of knowledge? Discuss how predicate logic is used to represent knowledge.
5. Tabulate the differences between various forms of learning such as learning by example, learning by taking advice, and explanation based learning.
6. What are the components of an expert system shell? Explain how forward chaining and backward chaining is used by the inference engine.

SECTION-C

7. In artificial intelligence, how are problems solved using state space search? Explain any one technique of heuristic search with example. Also, discuss the performance of the technique.
8. Explain the process of knowledge acquisition. Explain the various techniques of knowledge acquisition in detail.
9. What are the components of a natural language processing system? Explain the steps involved in the process of natural language processing with suitable examples.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.