

CDOE
MASTER OF COMPUTER APPLICATIONS
M. C. A. Sem-V : WINTER :- 2021
SUBJECT: ARTIFICIAL INTELLIGENCE AND APPLICATIONS

Day : Tuesday
Date 22-02-2022

W-5374-2021

Time : 10:00 AM-01:00 PM
Max. Marks: 80

N.B.:

- 1) Attempt **ANY FOUR** questions from Section – I and **ANY TWO** questions from Section – II.
 - 2) Answers to both the section should be written in **SAME** answer book.
 - 3) Figures to the right indicate **FULL** marks.
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SECTION – I

- Q.1** Define Expert System. Explain the architecture of expert system. State its applications. [12]
- Q.2** Compare and contrast Depth First Search and Breadth First Search. [12]
- Q.3** Define Knowledge. Explain Predicate logic as knowledge representation tool. [12]
- Q.4** Explain heuristic search method. Explain Best First Search method. [12]
- Q.5** Describe solution to Water Jug Problem with State Space. [12]
- Q.6** Write short notes on **ANY THREE** of the following: [12]
- a) Production system
 - b) Conceptual dependency
 - c) VIDWAN
 - d) Semantic net
 - e) Natural Language Processing

SECTION – II

- Q.7 a)** Write a Prolog program to read ten numbers and find its average. [08]
- b)** Write a Prolog program to display n^{th} term in Fibonacci series. [08]
- Q.8** Write a Prolog program to create a patients database (Patient name, Address, Symptoms, date_of_visit) and save this as a dynamic database. [16]
- Q.9** Explain Supervised and Unsupervised learning with reference to Neural Network. [16]

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