

S.D.E.

M.C.A. Sem - V : SUMMER - 2019

SUBJECT : ARTIFICIAL INTELLIGENCE AND APPLICATIONS

Day : Friday
Date : 03/05/2019

S-2019-5276

Time : 10.00 AM TO 1.00 PM
Max. Marks : 80

N.B.

- 1) Attempt **ANY FOUR** questions from Section – I and **ANY TWO** questions from Section – II.
 - 2) Figures to the **RIGHT** indicate **FULL** marks.
 - 3) Both the sections should be written in **SAME** answer books.
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SECTION – I

- Q.1** What is heuristic search? Explain Best first heuristic search technique using example. (12)
- Q.2** State Rules to convert predicate logic statements in clause form. (12)
- Q.3** Explain Fuzzy logic as a tool for knowledge representation with its applications. (12)
- Q.4** What is learning? Explain genetic algorithm as learning technique. (12)
- Q.5** Draw and explain basic block diagram of expert system. (12)
- Q.6** Explain application of AI techniques to solve vision problems. (12)
- Q.7** What is knowledge? Explain characteristics and different types of knowledge. (12)

SECTION – II

- Q.8** Represent given facts in predicate logic (16)
- i) Marcus was a man
 - ii) Marcus was a Pompeian
 - iii) All Pompeians were Romans
 - iv) Ceasar was a ruler
 - v) All Romans were either loyal to ceasar or hate him
 - vi) Everyone is loyal to someone

Answer the question with resolution Was Marcus loyal to ceasar?

- Q.9** Write a PROLOG program to find maximum and minimum number amongst the given numbers. (16)
- Q.10** Write notes on **ANY TWO** of the following. (16)
- a) Speech
 - b) Natural Language Processing
 - c) Semantic net

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