

B.TECH SEM – VII (2007 COURSE) (COMPUTER ENGG.) :
SUMMER - 2018
SUBJECT : ELECTIVE-I – ARTIFICIAL INTELLIGENCE

Day : **Friday**
Date : **25/05/2018**

S-2018-2773

Time : **02.30 PM TO 05.30 PM**
Max. Marks : 80.

N.B.:

- 1) Q. No. 1 and Q. No. 5 are **COMPULSORY**. Out of the remaining attempt any **TWO** questions from Section-I and any **TWO** questions from Section-II.
- 2) Both the sections should be written in **SEPARATE** answer books.
- 3) Figures to the **RIGHT** indicate full marks.
- 4) Assume suitable data if necessary.

SECTION-I

- Q.1** a) Explain Alpha-Beta cut offs. (05)
b) Describe Frames. (05)
c) Explain ISA Hierarchy. (04)
- Q.2** a) What is heuristic? For 8-puzzle problem give a good Heuristic Function? (07)
b) Give an Algorithm for AO*. (06)
- Q.3** a) Explain how Conceptual Dependency (CD) is used to represent knowledge. (07)
b) Describe Frames and Scripts. (06)
- Q.4** a) Describe Statistical Learning Methods. (07)
b) Explain Reinforcement Learning. (06)

SECTION-II

- Q.5** a) Discuss the components of Planning. (05)
b) Explain Case Based Reasoning. (05)
c) Describe Expert Systems. (04)
- Q.6** a) Draw the valid Fork labeling, L-labeling, T-labeling and Arrow labeling to label 3-D figures using Waltz Algorithm. (07)
b) Explain Block World's problem. (06)
- Q.7** a) Apply the constraint satisfaction algorithm to following problem (07)
SEND + MORE = MONEY.
Given the constraints
i) No two letters share the same values.
ii) The sum of digits must be as shown in the problem.
iii) Each letter has the value between 0 and 9.
b) Explain any one factor that contribute to the difficulty of Understanding a problem. (06)
- Q.8** a) Explain Expert System Shell. (07)
b) Compare RTN and ATN. (06)

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