

Exam.Code:0918

Sub. Code: 7015

1019

B.E. (Computer Science and Engineering)  
Sixth Semester  
CSE-614/CS-514: Artificial Intelligence (OLD)

Time allowed: 3 Hours

Max. Marks: 50

NOTE: Attempt five questions in all, including Question No. 1 which is compulsory and selecting two questions from each Unit.

x-x-x

- I. Attempt the following:-
- What is the use of Futility value in AO\* algorithm?
  - What are the problems associated with the hill climbing?
  - What are production systems?
  - Differentiate between forward reasoning and backward reasoning.
  - What is property inheritance?
  - What are the different elements of a script?
  - What are competing and cooperative agents?
  - Why Bayesian theorem is intractable?
  - What is STRIPS?
  - List different learning approaches.
- (10x1)

UNIT - I

- II. a) Describe the different problem characteristics that we must consider? Is heuristic approach a greedy approach?
- b) What is simulated annealing? How temperature schedule affects the outcome?
- III. a) Explain the A\* algorithm in detail? Prove that Algorithm will converge within the estimation error. (5,5)
- b) Describe the constraint satisfaction algorithm? Explain its working using an example. (5,5)
- IV. a) Explain the different exit criteria in Min-Max algorithm.
- b) What is Dempster shafer theory used for? Describe the term plausibility.
- c) What are partitioned semantic nets? Explain using an example. (4,3,2)

P.T.O.

(2)

**UNIT - II**

- V. a) What is Partial order planner? Explain is using an example. (5,5)  
b) What is continuous planner? For what kind of problems, it is used?
- VI. a) Explain the different learning approaches. What is inductive learning? (5,5)  
b) Explain the different phases of Natural Language Processing.
- VII. a) What are expert systems? Explain the different blocks of Rule based expert system. (6,4)  
b) What is the use of working memory in expert system?

x-x-x