Exam. Code: 0937
Sub. Code: 33789

2076
B.E. (Electrical and Electronics Engineering)
Seventh Semester
OE-EE-704: Artificial Intelligence

Time allowed: 3 Hours **Max. Marks: 50**

NOTE: ***Attempt five questions in all, including Question No. 1 (Section-A) which is compulsory and selecting two questions from each Section B-C.***

x-x-x

Section -A

Q 1(a) What is a production System? (10)

(b) What is the use of g and h' value in A* algorithm?

(c) What is frame problem?

(d) What is the use of mutex relations in planning graphs?

(e) What is closed world assumption?

Section -B

Q2 (a) Why do we use heuristic search techniques? Explain the simulated annealing approach on detail. (5)

(b) What type of problem can be solved with Means Ends Analysis? Explain its algorithm in detail? (5)

Q3 (a) List the different problem of Hill Climbing algorithm? Prove that by using a good heuristic function, local maxima problem of hill climbing algorithm can be avoided. (5)

(b) What is iterative Deepening? Explain its overall complexity in large graphs. (5)

Q 4 (a) Describe the Min-max algorithm using $\alpha - \beta$ pruning? Explain it by depicting a game tree. (5)

(b) How slots in frames can be represented as full fledged objects? (5)

Section -C

Q5 (a) What are fuzzy sets? Explain different operations that can be performed on fuzzy sets (5)

(b) Describe the GraphPlan algorithm in detail. (5)

Q6 (a) What is the meaning of conditional planning? Explain the conditional POP algorithm in detail. (5)

(b) What is continuous planning? How it improves upon the flaw of other planning agents? (5)

Q7 (a) Explain the architecture of expert system in detail. What are the different ways to characterize the experts systems. (5)

(b) What are Decision tree based expert systems? How Information gain method to select attributes in decision trees? (5).

x-x-x