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6E 6027

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B.Tech. VI Semester (Main/Back) Examination, May - June 2015
Computer Science
6CS6.2 Artificial Intelligence

Time : 3 Hours

Maximum Marks : 80
Min. Passing Marks : 24

Instructions to Candidates:

Attempt any five questions, selecting one question from each unit. All questions carry equal marks. (Schematic diagrams must be shown wherever necessary. Any data you feel missing suitably be assumed and stated clearly. Units of quantities used/calculated must be stated clearly.

Unit - I

1. a) What is AI and AI techniques? Briefly explain how AI technique can be represented. List out some of task domain of AI? (8)
- b) Define production system. Explain the elements of production system and also explain the characteristics of production system? (8)

OR

1. a) Discuss the algorithm of A* with the advantage over best first search procedure? (8)
- b) Discuss and compare hill climbing and Best - First - search technique? (8)

Unit - II

2. a) Discuss various approaches and issue in knowledge representation? (8)
- b) Explain the Algorithm of predicate logic resolution? (8)

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OR

2. a) Explain Non - monotonic reasoning and discuss various logic associated with it? (8)
b) Explain the difference between propositional and predicate logic? (8)

Unit - III

3. a) Explain Fuzzy logic and rule based system? (8)
b) Explain baye's theorem and what is mean by conditional probability? (8)

OR

3. a) A problem solving search can proceed either forward and backward. What factors determine the choice of directions for a particular problems? (8)
b) Short note on: Semantic networks scripts schemas. (8)

Unit - IV

4. Explain the algorithm of MINIMAX search procedure and discuss the following:
i) Alpha Beta Cutoff
ii) Waiting for quiescence (8×2=16)

OR

4. a) What are the steps in natural language processing? List and explain them briefly? (8)
b) Explain the following in detail:
i) Syntactic processing
ii) Semantic processing (8)

Unit - V

5. a) Discuss winston's learning program? (8)
b) Discuss "Explanation based generalization" [EBG] with the help of classical chess example. (8)

OR

5. a) Write a short note on : Version space? (8)
b) Discuss any two from the following:
i) Learning in problem solving.
ii) Learning from example.
iii) Expla nation based learning. (8)