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**B.Tech. (COMPUTER SCIENCE AND
ENGINEERING)**

Term-End Examination

June, 2013

BICS-021 : ARTIFICIAL INTELLIGENCE

Time : 3 hours

Maximum Marks : 70

*Note : Attempt **any seven** questions. All questions carry equal marks.*

1. (a) Discuss the performance of AO* algorithm and also discuss about various types of control strategies. 5
- (b) What is heuristic search ? Write heuristic function for travelling salesman problem with the help of suitable example. 5
2. (a) Explain intelligence and artificial intelligence systems with the help of suitable examples. 5
- (b) Explain with the help of example, how does conventional computing differ from the intelligence computing. 5
3. (a) What are the various types of reasoning methods ? Also discuss Baye's theorem. 5

- (b) Represent following sentences using symbolic logic - 5
- (i) A drunker is enemy of himself.
 - (ii) God helps those who help themselves.
 - (iii) Jack and Jill went up the hill.
4. (a) Give the conceptual dependency structure to parse the following sentence. 5
- “John wanted mary to go to the store”.
- (b) Write the algorithm of steepest ascent hill climbing. What are the drawbacks of it ? 5
- How to overcome from the drawbacks ?
5. (a) What is knowledge representation ? With the help of suitable example explain the issues in representation of knowledge with the help of suitable example. 5
- (b) Construct semantic net representation of the following sentence 5
- “Mary gave the green flowered vase to her favourite cousin”
6. Construct a script for going to a movie from the view point of the movie goer (regular visitor) 10
7. What are the different game playing techniques ? Explain minimax search procedure with a neat illustration. 10

8. (a) Define understanding. List out the major factors that makes understanding hard. 5
- (b) Briefly explain various steps in natural language understanding process. 5
9. Explain in detail the components of planning with an example and also discuss various types of planning techniques. 10
10. Write short notes on following (*any two*) : 10
- (a) Neural Networks
- (b) Monotonic and Non monotonic reasoning
- (c) Explanation based learning.
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