B.Tech. – VIEP – COMPUTER SCIENCE AND ENGINEERING (BTCSVI)

Term-End Examination

June, 2015

00884

BICS-021 : ARTIFICIAL INTELLIGENCE

Time : 3 hours   *Maximum Marks : 70*

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

1. (a) List down the characteristics of Intelligent agent.   5

    (b) State the significance of using Heuristic functions.   5

2. (a) Explain with the help of examples, how does conventional computing differ from the intelligence computing.   5

    (b) Explain the AO* Algorithm with a suitable example.   5

3. Represent the following sentences using symbolic logic :   10

    (a) God help those who help themselves.

    (b) Fruits and vegetables are delicious.

    (c) Jack and Jill went up the hill.

    (d) All students like good teachers.

    (e) All that glitters is not gold.

4. How can knowledge be represented in semantic nets ? Explain. Draw the semantic network of the sentence, "Bobby gives Arisha a gift." 10

5. What are the various types of reasoning methods ? Explain the concepts of Bayesian network. 10

6. What are the different game playing techniques ? Explain the minimax search procedure technique. 10

7. What are planning graphs ? Explain the various types of planning techniques. 10

8. (a) Discuss learning. Explain the various techniques used in learning. 5

   (b) Discuss the basic elements of natural language procedure. 5

9. Give the advantages of expert system architecture based on decision tree over production rules with example. What are the main disadvantages ? 10

10. Write short notes on any *two* of the following : 2×5=10

    (a) Bayes' Theorem

    (b) Propositional and Predicate Logic

    (c) Breadth First and Depth First Search