B.Tech. (COMPUTER SCIENCE AND ENGINEERING)

Term-End Examination

December, 2013

BICS-021 : ARTIFICIAL INTELLIGENCE

Time : 3 hours   *Maximum Marks : 70*

*Note :   Attempt **any seven** questions.*

*Each question carry **equal** marks.*

1. (a) What is ARTIFICIAL INTELLIGENCE ?   5
         What are the various types of production
         systems ?
    (b) Describe the characteristics of production   5
         Systems.

2. What is breadth first search ? What is depth first   10
    search ? Compare and contrast the breadth first
    and depth first search.

3. (a) What are the properties of knowledge   5
         representation ? Explain.
    (b) Describe the issues in knowledge   5
         representation. Explain.

4. Describe the resolution procedure, which gains   10
    the efficiency that it operate on statements.

5. (a) What are the types of slot and filter   5
         structures ? Explain.
    (b) What is semantic net and indicate the   5
         intersection search and non-binary
         predicates ?

6. (a) Write a short notes on :   5
         (i)   Alpha cutoff
         (ii) Beta cutoff
    (b) Explain the procedure of Alpha and Beta   5
         cutoff's.

7. (a) What is planning ? What are the   5
         components of a planning system ?
    (b) Explain the Goal Stack planning with   5
         example.

8. (a) Explain trihedral and non trihedral vertices   5
         with neat sketch.
    (b) What are the constraints for the trihedral   3
         and non trihedral vertices ?
    (c) Explain the level of Interaction among   2
         components.

9. (a) Contrast expert systems and neural   5
         networks in terms of knowledge
         representation, knowledge acquition and
         explonation. Give one domain in which the
         expert system approach would be move
         promising and one domain in which the
         neural network approach would be more
         promising.
    (b) Write a short notes on Expert System Calls.   5

10. (a) Briefly explain AO* algorithm for traversing   5
         in graph.
    (b) What are the various control strategies ?   5