

## ***B. Tech Degree VIII Semester Examination, April 2010***

### **CS 802 ARTIFICIAL INTELLIGENCE** (2006 Scheme)

Time : 3 Hours

Maximum Marks : 100

#### **PART - A** (Answer ALL questions)

(8 x 5 = 40)

- I. (a) Write the characteristics of production systems.  
(b) Write a note on constraint satisfaction.  
(c) Write the Unification Algorithm.  
(d) Define the term 'Clause'. Write an example also.  
(e) Differentiate between Procedural knowledge and Declarative knowledge.  
(f) Write a note on Bayesian Networks.  
(g) What is meant by Software Agent?  
(h) Write a note on software agent topology.

#### **PART - B**

(4 x 15 = 60)

- II. (a) Write a note on means and end analysis. (7)  
(b) Write and explain A\* Algorithm. (8)
- OR**
- III. (a) Write the difference between 'Generate and Test' and 'Hill Climbing' searching strategies. (5)  
(b) What are the various Hill Climbing searching strategies and how it differ from the other? (10)
- IV. Describe the algorithm in detail to convert a wff into clause form with the help of an example. (15)
- OR**
- V. (a) Describe the algorithm for 'Resolution by Refutation' in detail with the help of an example. (10)  
(b) Write a note on Goal Trees. (5)
- VI. Write a short notes on :  
(i) Semantic Nets  
(ii) Frames  
(iii) Conceptual Dependency. (15)
- OR**
- VII. (a) What is meant by Learning? Describe various methods of Learning. (7)  
(b) What is meant by Natural Language Processing (NLP)? Describe various components of NLP in detail. (8)
- VIII. (a) Describe the classification of Software Agent in detail. (8)  
(b) Describe the characteristics of Software Agents. (7)
- OR**
- IX. Describe the Java Implementation of Intelligent Agents. (15)

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