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Reg. No. : .....

Name : .....

**Eighth Semester B.Tech. Degree Examination, April 2014  
(2008 Scheme)**

**08.806 : Elective – IV : ARTIFICIAL INTELLIGENCE (R)**

Time : 3 Hours

Max. Marks : 100

**PART – A**

Answer **all** questions.

1. Define AI. Mention some application of AI also.
2. What is a Production System ?
3. Compare BFS and DFS with their advantages and disadvantages.
4. What is meant by Alpha-Beta pruning ?
5. State the significance of initial values of weights and the learning rate parameters in learning laws.
6. Write a short note on Semantic Nets.
7. Explain briefly the perception learning algorithm.
8. What is meant by goal driven reasoning ? Explain.
9. Discuss about a production system example is PROLOG.
10. Compare Data base systems and expert systems. **(10×4=40 Marks)**

**PART – B**

**Module – I**

11. a) Explain with an example how state space representation is used to solve problems. **10**
- b) Explain A\* algorithm. Is it optimal under all conditions ? **10**

OR

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12. a) Explain how Min Max search procedure can be used for game playing. 10  
b) Discuss how unification algorithm is used in predicate calculus with an example. 10

**Module – II**

13. a) What is meant by Genetic algorithm ? Explain. 8  
b) Explain with an example, how resolution can be used to show that a conclusion is valid. 12

OR

14. a) What do you mean by back propagation learning ? Explain. 10  
b) Write short notes on : 10  
i) Scripts  
ii) Frames in knowledge representation.

**Module – III**

15. a) Explain the architecture of expert systems with a neat schematic sketch. 15  
b) What are Meta-interpreters in PROLOG ? 5

OR

16. a) Explain in detail the stochastic tools used for language analysis. 12  
b) Write a short note on Natural language applications. 8
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