Roll No. | | | | | | | | | | | | | Total No. of Pages : 02

Total No. of Questions : 18

B.Tech.(CSE) (2011 Onwards) (Sem.–7,8)

ARTIFICIAL INTELLIGENCE

Subject Code : BTCS-701

Paper ID : [A2985]

Time : 3 Hrs. Max. Marks : 60

INSTRUCTION TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt ANY FOUR questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students have to attempt ANY TWO questions.**

SECTION-A

Explain the following in brief :

1. Need of formulating the problems in AI.
2. Alpha-beta pruning.
3. Advantages of logical reasoning.
4. Implementation challenges in temporal constraints.
5. Characteristics of bayes rule.
6. Role of reinforcement learning in AI.
7. Major reasons for growth of intelligent agents.
8. Features of utility functions in decision making.
9. Significance of planning in the blocks world.
10. Future scope of artificial intelligence.

SECTION-B

11. Give details of the year-wise development of AI. How AI is being used in the area of medical research?

12. Describe any four informed searching techniques with suitable examples.

13. Differentiate between forward chaining and backward chaining.

14. Discuss the various in-built functions used in LISP.

15. Explain the process of inductive learning using decision trees.

SECTION-C

16. Write an algorithm for A* searching technique. Explain with the help of suitable example.

17. Discuss the role of uncertainty in AI. Explain decision theoretic expert systems in brief.

18. Differentiate between the various learning methods: neural networks, reinforcement learning and genetic algorithms.