Reg. No. : | | | | | | | | | | | | |

Question Paper Code : 60390

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/ DECEMBER 2016.

Sixth Semester

Computer Science and Engineering

CS 2351/CS 61/10144 CS 601 — ARTIFICIAL INTELLIGENCE

(Common to Seventh Semester-Electronics and Instrumentation Engineering/Instrumentation and Control Engineering/ Information Technology)

(Regulations 2008/2010)

(Also common to PTCS 2351/ 10144 CS 601 – Artificial Intelligence for B.E (part-time) Sixth Semester- Computer Science and Engineering – Regulations 2009/2010)

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Mention how the search strategies are evaluated?
2. Define admissible and consistent heuristics.
3. Differentiate Forward Chaining and Backward Chaining.
4. What is the use of Online search agent in unknown environment.
5. Distinguish between problem solving and planning.
6. What are the characteristics of partial order planer?
7. What is partial order Planning?
8. Define temporal models.
9. Distinguish between supervised and unsupervised learning.
10. Define support vectors.

PART B — (5 × 16 = 80 marks)

11. (a) Define Agents. Specify the PAGE descriptions for intelligent agent design with examples and explain basic types of agents. (16)

Or

(b) Analyze the uninformed search algorithms with respect to different criteria. Explain heuristics for constraint satisfaction problems. (16)

12. (a) Explain Forward chaining and Backward chaining algorithm with an example.

Or

(b) (i) Illustrate the use of First Order Logic to represent Knowledge. (10)

(ii) Write short note on Unification (6)

13. (a) Explain the procedure of planning with state space search with example. (16)

Or

(b) Explain the process of scheduling with resource constraints in detail with suitable example. (16)

14. (a) Explain the method of performing exact inference in Bayesian Networks. (16)

Or

(b) Explain the concept of inference in temporal models. (16)

15. (a) (i) Give decision tree learning algorithm and explain. (8)

(ii) Explain the EM algorithm. (8)

Or

(b) (i) Explain the back propagation process with its algorithm. (8)

(ii) What is passive ADP agent? Give full agent program for a passive ADP agent? (8)