Exam.Code:0917
Sub. Code: 33436

2076

B.E. (Computer Science and Engineering)
Fifth Semester
CS-503: Artificial Intelligence

Time allowed: 3 Hours **Max. Marks: 50**

NOTE: Attempt five questions in all, including Question No. 1 which is compulsory and selecting two questions from each Section.

x-x-x

1. Briefly explain the following:
   (a) Heuristic search
   (b) Syntac and Semantics in predicate logic
   (c) Non-monotonic reasoning
   (d) Frames and Scripts
   (e) Intelligent agent **(5x2=10)**

Section-A

2. Define Artificial Intelligence and list its basic elements. Discuss how an Artificial Intelligence system is different from a conventional computing system? **(10)**
3. (a) What does the acronym PROLOG stand for? Why is PROLOG suitable for Artificial Intelligence programming? Discuss using a suitable example. **(5)**
   (b) What are the limitations of predicate logic as a tool for knowledge representation? Explain using example(s). **(5)**
4. (a) How do you perform game playing using Alpha-Beta pruning? **(6)**
   (b) Differentiate between A* and AO* search. List the drawbacks of Generate and Test technique. **(4)**

Section-B

5. What is Fuzzy logic? Explain its significance. Discuss Fuzzy logic based control systems. **(10)**
6. Discuss basic components and architecture of an Expert System giving a suitable example. **(10)**
7. Enumerate the different forms of learning. What do understand by Planning with state space search? Explain in detail giving a suitable example. **(10)**

x-x-x