

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

M.E –IIst SEMESTER–EXAMINATION – JULY- 2012

Subject code: 1710410

Date: 14/07/2012

Subject Name: Introduction to Artificial Intelligence.

Time: 10:30 am – 13:00 pm

Total Marks: 70

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1 (a)** What is AI? What is intelligence? Discuss Practical Impact of AI in your field of engineering. **07**
- (b)** Explain in detail expert system architecture. Discuss characteristic features of expert systems. **07**
- Q.2 (a)** Give the problem space for the following. **07**
(1) Chess. (2) Water Jug Problem.
- (b)** Explain Mean-End analysis algorithm. **07**
- OR**
- (b)** Explain hill climbing algorithm. **07**
- Q.3 (a)** Explain cut predicate and its types. **07**
- (b)** Explain Graph theory. **07**
- OR**
- Q.3 (a)** Explain fail predicate with example. **07**
- (b)** Discuss strategies for state space search. **07**
- Q.4 (a)** Explain nearest neighbor algorithm with appropriate example. **07**
- (b)** Explain best first search algorithm with example. **07**
- OR**
- Q.4 (a)** How is machine learning distinguished from general knowledge acquisition? Discuss in detail with appropriate illustration. **07**
- Q.4 (b)** Explain pattern directed search. **07**
- Q.5 (a)** What is simulated annealing? Write an algorithm for simulated annealing. **07**
- (b)** Explain recursion based search. **07**
- OR**
- Q.5 (a)** Give five examples of facts that are difficult to represent and manipulate in predicate logic **07**
- (b)** Explain in brief appropriate case study of AI in manufacturing. **07**
