

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

ME Semester –III Examination Dec. - 2011

Subject code: 730802

Date: 08/12/2011

Subject Name: Artificial Intelligence

Time: 10.30 am – 01.00 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) Differentiate Artificial Intelligence and Natural intelligence with their advantages and limitations. 07

(b) Explain the importance of Mathematics in Artificial Intelligence. 07

Q.2 (a) Explain Knowledge Based Expert System in Artificial Intelligence. 07

(b) What is search? Differentiate Informed and Un-informed Search with advantages and limitations. 07

OR

(b) What is Neural Network? Explain the applications of Artificial neural Network in Computer Integrated Manufacturing. 07

Q.3 (a) Differentiate Rule based and Case based Expert System with advantages and limitations. 07

(b) What is Constraint Satisfaction Problem? Explain Consistency Driven Techniques for solving CSP. 07

OR

Q.3 (a) What is Pruning? Explain Alpha-Beta Pruning with algorithm. 07

(b) Write the production rules for Water jug problem. Two water jugs of 3 and 4 liter capacity is given. How can you fill 2 liter of water in big jug without any measuring aids? 07

Q.4 (a) State the importance of Crypt-arithmetic? Show the step to solve the puzzle. 07

SEND + MORE = MONEY

(b) What is knowledge representation in AI? Explain Predicate Logic and predicate Calculus. 07

OR

Q.4 (a) What is crypt-arithmetic? Show the step to solve the puzzle. 07

EAT + THAT = APPLE

(b) What is Machine Vision? Explain the importance of machine vision in manufacturing Industry. 07

Q.5 (a) What is inference? Explain the rules of inference and working of inference engine in detail. 07

(b) Explain AO* algorithm in detail. 07

OR

Q.5 (a) What is Natural Language Processing? Explain the applications of Natural Language Processing in AI. 07

(b) Explain the advancement in Artificial Intelligence. 07
