

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**ME – SEMESTER III (OLD) – • EXAMINATION – SUMMER 2016**

**Subject Code: 730802****Date: 05/05/2016****Subject Name: Artificial Intelligence****Time: 10:30 am to 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) Write the important of artificial intelligence (AI) in CAD/CAM and engineering field. **07**  
(b) Write the difference between natural intelligence and artificial intelligence. **07**
- Q.2** (a) Write the use of “Turing test” with neat sketch. **07**  
(b) What do you mean by predicate calculus? Explain with suitable example. **07**
- OR**
- (b) What do you mean by search? Through tree diagram show the best-first search. **07**
- Q.3** (a) Write the short note on pattern directed search. **07**  
(b) Write the algorithm of breadth-first search **07**
- OR**
- Q.3** (a) Write short note on recursion based Search **07**  
(b) Describe the MINMAX search procedure. **07**
- Q.4** (a) When the branch-and-bound strategy is applied? Explain with suitable example. **07**  
(b) Explain the symbol based machine learning process. **07**
- OR**
- Q.4** (a) Write the difference between rule based expert system and knowledge based expert System. **07**  
(b) Explain the application of genetic algorithm (GA) with the help of suitable example. **07**
- Q.5** (a) Explain the use of metaknowledge in expert systems inference by suitable example. **07**  
(b) Explain the application of artificial neural network (ANN) with the help of suitable example. **07**
- OR**
- Q.5** (a) Write the parse tree for the sentence “The man bites the dog”. **07**  
(b) Discuss the role of knowledge in language understanding. **07**

\*\*\*\*\*