

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
ME – SEMESTER II (NEW) – • EXAMINATION – SUMMER 2016

Subject Code: 2720819

Date: 31/05/2016

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) Define artificial intelligence and write its applications. **07**
(b) Define and describe the differences among knowledge, belief and data. **07**
- Q.2** (a) Describe the knowledge representation and knowledge acquisition in brief. **07**
(b) Explain the predicate function and conditional function with examples in context of LISP. **07**
- OR**
- (b) Explain the recursion function and mapping function with examples in context of LISP. **07**
- Q.3** (a) Write the short note on Dempster-Shafer theory. **07**
(b) What do you mean by blind search? Represent the breadth-first search through tree diagram. **07**
- OR**
- Q.3** (a) Discuss and compare hill climbing and best-first search techniques. **07**
(b) Write the desirable properties of heuristic search algorithms. **07**
- Q.4** (a) What do you mean by matching? Explain the matching process in brief. **07**
(b) Write the short note on probabilistic measures. **07**
- OR**
- Q.4** (a) Enlist the different parsing techniques and explain any two of them. **07**
(b) Write the short note on RETE matching algorithm. **07**
- Q.5** (a) Discuss the pattern recognition process in detail. **07**
(b) Explain how the high-level processing defers from low-level processing. **07**
- OR**
- Q.5** (a) Describe the processing stages follows in computer vision system. **07**
(b) What are different learning systems? Explain ID3 and INDUCE systems. **07**
