Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

ME- SEMESTER II– EXAMINATION – SUMMER 2015

Subject Code: 2720819 **Date: 01/06/2015**

Subject Name: Artificial intelligence

Time: 2:30 PM – 5:00 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 the ñKnowledgeò in context of artificial intelligence? Write the difference between declarative knowledge and procedural knowledge.	**07**
	(b)	What do you mean by predicate function? List the any five predicates.	**07**
Q.2	**(a)**	Explain the close world assumption briefly.	**07**
	(b)	Write the short note on Ad-Hoc methods of dealing with uncertainty.	**07**
		OR	
	(b)	Write the algorithm for breadth-first search and depth-first search strategies.	**07**
Q.3	**(a)**	Describe the difference between a bag and a set with suitable example.	**07**
	(b)	Briefly explain the indexing and retrieval techniques.	**07**
		OR	
Q.3	**(a)**	Explain the different levels of knowledge used in language understanding?	**07**
	(b)	What do you mean by parsing? Explain the difference between top-down and bottom-up parsing with suitable example.	**07**
Q.4	**(a)**	Explain the difference between the natural language generation and natural language understanding.	**07**
	(b)	Compare the deterministic decision function approach to the probabilistic decision function approach in pattern recognition applications.	**07**
		OR	
Q.4	**(a)**	Write the applications of computer vision in an area of AI.	**07**
	(b)	Explain the intermediate-level image processing briefly.	**07**
Q.5	**(a)**	Write the characteristic features of expert systems.	**07**
	(b)	Explain in detail the knowledge acquisition with suitable example.	**07**
		OR	
Q.5	**(a)**	Describe the basic cycle of genetic algorithm.	**07**
	(b)	Define inductive learning and explain why still it is in use even though it is not a valid form of learning.	**07**

****