Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

ME – SEMESTER II– EXAMINATION – WINTER - 2016

Subject Code: 2720819 **Date: 21/11/ 2016**

Subject Name: Artificial Intelligence

Time: 2:30 pm to 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)**	Explain in brief: (i) Computational logic, (ii) Knowledge acquisition.	**07**
	(b)	Define with suitable example: local variable, interaction and recursion.	**07**
Q.2	**(a)**	Enlist the characteristics of PROLOG.	**07**
	(b)	Explain the fuzzy logic with two suitable examples.	**07**
		OR	
	(b)	Write the short note on Bayesian probabilistic inference.	**07**
Q.3	**(a)**	Write the short note on Dempster-Shafer theory.	**07**
	(b)	Enlist the advantages and disadvantages of Backward and forward chaining.	**07**
		OR	
Q.3	**(a)**	Write the short note on Hybrid control structures.	**07**
	(b)	What do you mean by optimal path search? Describe with suitable example.	**07**
Q.4	**(a)**	What are the different knowledge organizing techniques? Describe any one.	**07**
	(b)	Distinguish partial and fuzzy matching.	**07**
		OR	
Q.4	**(a)**	Enlist the different components and limitations of expert system.	**07**
	(b)	Enlist the different parsing techniques and explain any two of them.	**07**
Q.5	**(a)**	Define in context of AI: pattern, pattern category, pattern recognition.	**07**
	(b)	Write the applications of expert system in manufacturing and design.	**07**
		OR	
Q.5	**(a)**	What do you mean by speech recognition? Discuss the challenges with speech recognition.	**07**
	(b)	What are different learning systems? Discuss any two learning systems.	**07**

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