Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

M.E Sem-I Regular Examination January / February 2011

Subject code: 711102N

Subject Name: Fundamentals of I.C. Engine and Automobile

Date: 01 /02 /2011 **Time: 02.30 pm – 05.00 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 working of single plate clutch with neat sketch.	**07**
	(b)	Describe bosch fuel injection pump with neat sketch.	**07**
Q.2	**(a)**	Explain valve timing diagram of four stroke petrol engine with neat sketch.	**07**
	(b)	Explain multipoint fuel injection system with neat sketch.	**07**
		OR	
	(b)	Explain with diagram working of sliding mesh gear box.	**07**
Q.3	**(a)**	Explain working of stratified charged engine with neat sketch.	**07**
	(b)	Write short note on vibration damper.	**07**
		OR	
Q.3	**(a)**	Describe common rail injection system with neat sketch.	**07**
	(b)	Describe different types of injection nozzles with neat sketch.	**07**
Q.4	**(a)**	Describe solex carburetor with neat sketch.	**07**
	(b)	Explain construction and working of fuel injector with neat sketch.	**07**
		OR	
Q.4	**(a)**	Draw and explain layout of typical electrical system of an automobile.	**07**
	(b)	Explain with diagram worm-wheel type steering system.	**07**
Q.5	**(a)**	Explain basic design aspects of piston. Explain it's design procedure in brief.	**07**
	(b)	Write short note on pneumatic governors.	**07**
		OR	
Q.5	**(a)**	Describe cam less engine with relative advantages and disadvantages.	**07**
	(b)	Differentiate Actual cycle and air fuel cycle.	**07**

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