Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

ME - SEMESTER– II(New course) • EXAMINATION (Remedial) – WINTER- 2015

Subject Code: 2721109 **Date: 09/12/2015**

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

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)**	Briefly explain a typical electronic engine management system.	**07**
	(b)	Explain working principle of synchromesh gear box.	**07**
Q.2	**(a)**	State and explain the factors responsible for change in valve timing in actual cycle as compared to ideal cycle.	**07**
	(b)	State function of vibration damper in automobile. Describe with diagram the working of telescopic hydraulic shock absorber.	**07**
		OR	
	(b)	Explain selection of material for piston and write design procedure to design piston head.	**07**
Q.3	**(a)**	What do you mean by carburation? Explain principal of carburetor with diagram?	**07**
	(b)	Describe principle of multipoint injection system with neat sketch.	**07**
		OR	
Q.3	**(a)**	Explain CRDI system.	**07**
	(b)	Explain use of combustion charts for cycle analysis.	**07**
Q.4	**(a)**	Discuss low heat rejection engine with its design principles.	**07**
	(b)	Explain working of stratified charge engine.	**07**
		OR	
Q.4	**(a)**	Explain VVT technology in IC engine?	**07**
	(b)	Explain Distributor type pump for CI engine.	**07**
Q.5	**(a)**	Explain Electrical system of Automobile with necessary diagram.	**07**
	(b)	Explain the following: (1) Aspect ratio of a tyre (2) Low profile inflated tyre (3) Under inflated tyre	**07**
		OR	
Q.5	**(a)**	Draw circuit diagram for a flashing light indicating system? Describe construction and working of its flasher unit.	**07**
	(b)	Classify various steering systems. Explain with diagram the working of rack and pinion steering system.	**07**

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