Seat No.: _____ *Enrolment No._____*

GUJARAT TECHNOLOGICAL UNIVERSITY

BE- IVth SEMESTER–EXAMINATION – MAY/JUNE- 2012

Subject code: 140202 **Date: 31/05/2012**

Subject Name: Fundamentals of Automobile Systems

Time: 10:30 am – 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)**	Explain comparison between petrol engine and diesel engine.	**07**
	(b)	Explain construction and working of four stroke petrol engine with neat sketch.	**07**
Q.2	**(a)**	Explain sliding mesh gear box with neat sketch.	**07**
	(b)	List advantages and limitations of LPG as automobile fuel.	**07**
		OR	
	(b)	Explain construction of chassis frame with neat sketch.	**07**
Q.3	**(a)**	Explain various vehicle layouts based on controls and positioning.	**07**
	(b)	Explain tractive force and gradeability.	**07**
		OR	
Q.3	**(a)**	Explain various resistances during vehicle motion.	**07**
	(b)	Explain bleeding of brakes.	**07**
Q.4	**(a)**	Explain construction and working of internal expanding brakes with neat sketch.	**07**
	(b)	Explain construction and working of propeller shaft with neat sketch.	**07**
		OR	
Q.4	**(a)**	Write short note on tubeless tyres.	**07**
	(b)	Explain camber and caster in steering with neat sketch.	**07**
Q.5	**(a)**	Give list of steering gear box types and explain any one of them with neat sketch.	**07**
	(b)	Explain various tread patterns of tyre with neat sketch.	**07**
		OR	
Q.5	**(a)**	List the types of suspension system and explain any one of them with neat sketch.	**07**
	(b)	Explain construction and working of single plate clutch with neat sketch.	**07**

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