Seat No.:	Enrolment No.

## **GUJARAT TECHNOLOGICAL UNIVERSITY**

BE - SEMESTER-VII • EXAMINATION – WINTER • 2014

Subject Name: Two and Three Wheeler Technology Time: 10:30 am - 01:00 pm Instructions:  Total Marks			Date: 29-11-2014	
		: 70		
		Attempt all questions.  Make suitable assumptions wherever necessary.  Figures to the right indicate full marks.		
Q.1	(a) (b)	Explain various systems used in two wheelers.  Differentiate between Endure bikes and Cruiser bikes.	07 07	
Q.2	(a) (b)	Define scavenging? Explain any one process with suitable sketch.  Explain the following:  • Air resistance  • Gradient resistance  • Rolling resistance	07 07	
	<b>(b)</b>	<b>OR</b> Explain with suitable diagram how trail causing a self centering effect?	07	
Q.3	(a) (b)	Describe with neat sketch the construction details of head light of two wheeler.  Discuss the working electric horn used in two wheelers.  OR	07 07	
Q.3	(a) (b)	Discuss kinematic and dynamic requirements for suspension mechanism.  Explain sprung and unsprung mass ratio.	07 07	
Q.4	<ul><li>(a)</li><li>(b)</li></ul>	Classify brakes used in two wheeler. Explain internal expanding drum brake with suitable sketch.  Classify gear box used in two and three wheelers. Explain any one with neat sketch.	07 07	
		OR		
Q.4	(a) (b)	Explain working of torque convertor with neat sketch.  Which are the different types of frames used in two wheeler? Explain any one in detail.	07 07	
Q.5	(a) (b)	Discuss single acting and double acting calipers in details.  Explain the basic principle of friction type clutch with neat sketch.  OR	07 07	
Q.5	(a) (b)	Explain the factors affecting or road holding of tow wheelers.  Discuss the factors affecting stability in two wheelers.	07 07	

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