

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**B. E. - SEMESTER – VII • EXAMINATION – WINTER 2012**

**Subject code: 170206****Date: 28/12/2012****Subject Name: Two and Three Wheeler Technology (Dept. Elective-I)****Time: 10.30 am - 01.00 pm****Total Marks: 70****Instructions:**

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

**Q.1** (a) Explain selection criteria and Design considerations for two wheeler. **07**  
(b) Classify various types of three wheelers. **07**

**Q.2** (a) Explain requirements for engine lubrication. **07**  
(b) Explain moped cranking mechanism. **07**

**OR**

(b) Explain ergonomic considerations for body work of two and three wheelers. **07**

**Q.3** (a) Explain factors affecting fuel economy in two and three wheelers. **07**  
(b) Explain swinging arm type suspension systems. **07**

**OR**

**Q.3** (a) Explain drum brake with neat sketch. **07**  
(b) Describe the battery charging system used for two wheelers. **07**

**Q.4** (a) Explain types of three wheeler bodies. **07**  
(b) Explain preventive maintenance in two and three wheelers. **07**

**OR**

**Q.4** (a) Explain epicyclic gear train with neat sketch. **07**  
(b) Explain any one type of final drive used in two wheelers with neat sketch. **07**

**Q.5** (a) Explain design considerations of suspension system. **07**  
(b) Explain continuously variable transmission-CVT. **07**

**OR**

**Q.5** (a) Explain types of tyres for two and three wheelers. **07**  
(b) Compare the single cradle frame and double cradle frame. **07**

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