

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VII • EXAMINATION – WINTER • 2014****Subject Code: 170206****Date: 29-11-2014****Subject Name: Two and Three Wheeler Technology****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 various systems used in two wheelers. **07**
(b) Differentiate between Endure bikes and Cruiser bikes. **07**

- Q.2 (a)** Define scavenging? Explain any one process with suitable sketch. **07**
(b) Explain the following: **07**
- Air resistance
 - Gradient resistance
 - Rolling resistance

OR

- (b)** Explain with suitable diagram how trail causing a self centering effect? **07**
- Q.3 (a)** Describe with neat sketch the construction details of head light of two wheeler. **07**
(b) Discuss the working electric horn used in two wheelers. **07**

OR

- Q.3 (a)** Discuss kinematic and dynamic requirements for suspension mechanism. **07**
(b) Explain sprung and unsprung mass ratio. **07**
- Q.4 (a)** Classify brakes used in two wheeler. Explain internal expanding drum brake with suitable sketch. **07**
(b) Classify gear box used in two and three wheelers. Explain any one with neat sketch. **07**

OR

- Q.4 (a)** Explain working of torque convertor with neat sketch. **07**
(b) Which are the different types of frames used in two wheeler? Explain any one in detail. **07**

- Q.5 (a)** Discuss single acting and double acting calipers in details. **07**
(b) Explain the basic principle of friction type clutch with neat sketch. **07**

OR

- Q.5 (a)** Explain the factors affecting road holding of tow wheelers. **07**
(b) Discuss the factors affecting stability in two wheelers. **07**
