

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**BE - SEMESTER-VII(OLD) • EXAMINATION – WINTER 2016**

**Subject Code: 170206****Date: 18/11/2016****Subject Name: Two & Three Wheeler Technology ( Department Elective-I )****Time: 10:30 AM to 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) Classification of three wheelers vehicles and draw the layouts of three wheeler **07**  
 (b) Explain disc brake system for two wheeler. **07**
- Q.2** (a) Explain Systems requirements for Engine lubrication **07**  
 (b) Explain design considerations for engine. **07**
- OR**
- (b) Describe working of two stroke engine with neat sketch. **07**
- Q.3** (a) Explain types of tyres for two and three wheelers. **07**  
 (b) Explain continuously variable transmission-CVT **07**
- OR**
- Q.3** (a) Describe the special requirements for racing bike **07**  
 (b) Define the following terms: **07**
1. Front Ground Trail
  2. Wheelbase
  3. Rack Angle
  4. Front Offset
  5. Capsize
  6. Wobble
  7. Weave
- Q.4** (a) Explain Side Car with advantages and disadvantages. **07**  
 (b) Which are the different types of frames used in two wheeler? Explain any one in detail. **07**
- OR**
- Q.4** (a) Explain ergonomics and comfort consideration in two wheeler. **07**  
 (b) Explain Electric horn with figure **07**
- Q.5** (a) Explain factor affecting road holding & vehicle stability **07**  
 (b) Explain layouts with neat sketch: **07**
1. Mechanical Braking system
  2. Hydraulic Braking system
- OR**
- Q.5** (a) Describe the battery charging system used for three wheelers **07**  
 (b) Describe Preventive and Brake down maintenance **07**

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