

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-VI • EXAMINATION – WINTER • 2014****Subject Code: 160205****Date: 03-12-2014****Subject Name: Automobile Chassis and Body Engineering****Time: 02:30 pm - 05:00 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 different types of vehicle bodies in detail. **07**
- (b) Explain different materials used for automobile body. **07**
- Q.2** (a) Explain functions and classification of automotive seats showing different seat parameters. **07**
- (b) Explain SLED test or AIS 016 for seats. **07**
- OR**
- (b) Explain shear panel method for vehicle body. **07**
- Q.3** (a) What is surface protection for vehicle body? Explain different methods of painting process. **07**
- (b) Give the comparison between toughened glass, sheet glass and laminated glass. **07**
- OR**
- Q.3** (a) Discuss about GRP and FRP used in automobile body. **07**
- (b) Explain 1. Dashboard, 2. Instrument panel, 3. passenger compartment lightning and 4. Car radio. **07**
- Q.4** (a) How the crash test is performed for auto vehicles? **07**
- (b) Write a short note on vehicle safety for auto vehicles. **07**
- OR**
- Q.4** (a) Explain different types of forces and moments acting on vehicle along with there effects on vehicle. **07**
- (b) Explain various body optimization techniques used for drag reduction for vehicle body. **07**
- Q.5** (a) What do you mean by drag? Explain various types of drags faced by the vehicle while moving on road. **07**
- (b) Explain briefly wind tunnel testing of scale model. **07**
- OR**
- Q.5** (a) How the roll over test is performed for auto vehicles? **07**
- (b) Draw various layouts of bus bodies and explain each. **07**

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