

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER-VIII • EXAMINATION – WINTER • 2014

Subject Code: 181907**Date: 25-11-2014****Subject Name: Automobile 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) Differentiate between streamlined and bluff body. Explain the various methods for reducing the drag force in automobile. **07**
(b) Describe the drag force, side force and lift forces & explain how it effects on pitching, yawing and rolling moment. **07**
- Q.2** (a) Explain wind tunnel testing of scale model. **07**
(b) Give the difference between toughened glass, sheet glass and laminated glass. **07**
- OR**
- (b) Explain briefly GRP and FRP used in automobile body. Also give the merits and demerits of FRP over GRP. **07**
- Q.3** (a) Explain the various methods for improving visibility and space in cars. **07**
(b) Explain the various adhesives and sealants used in automobile. **07**
- OR**
- Q.3** (a) Discuss about interior trim, exterior trim and upholstery of automobile body. **07**
(b) Explain briefly: “Water leakage test.” **07**
- Q.4** (a) Explain the dimensions of driver’s seat in relation to controls & driver’s cabin design with neat sketch. **07**
(b) Explain the various Sources of body noises testing and methods of elimination of body noise in details. **07**
- OR**
- Q.4** (a) Enlist different types of bus bodies & explain split level and articulated bus with neat sketch. **07**
(b) Differentiate between frame construction & double skin construction with suitable example. **07**
- Q.5** (a) Draw the bus body layout and give the function of each component of bus body. **07**
(b) Explain roll over test to be performed for auto vehicles. **07**
- OR**
- Q.5** (a) Explain briefly: “Heating and Ventilation systems used in auto vehicles” **07**
(b) Explain briefly: “Shear panel method for analysis of body loads.” **07**
