

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VI • EXAMINATION – SUMMER • 2014****Subject Code: 160205****Date: 26-05-2014****Subject Name: Automobile Chassis and Body Engineering****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) What is vehicle drag? Explain the types of drags faced by the vehicle. **07**
(b) Explain body optimization techniques and aerodynamics aids for optimization of drag. **07**
- Q.2** (a) Explain different materials used for automobile body. **07**
(b) What is dash board? Explain different instruments included in dash board. **07**
- OR**
- (b) Explain roll over test to be performed for auto vehicles. **07**
- Q.3** (a) Give detailed classification of vehicle bodies. **07**
(b) What is vehicle safety? Explain requirements and provisions for vehicle safety. **07**
- OR**
- Q.3** (a) Explain shear panel method for vehicle body. **07**
(b) Explain briefly 'heating and ventilation systems' of the vehicle. **07**
- Q.4** (a) Explain different aerodynamic forces and moments with their effects on the vehicle. **07**
(b) Explain selection of paint and different methods of painting process. **07**
- OR**
- Q.4** (a) Give the difference between toughened glass, sheet glass and laminated glass. **07**
(b) Explain different symmetric and asymmetric vertical loads in car. **07**
- Q.5** (a) Write a short note on 'wind tunnel testing of scale model'. **07**
(b) Explain different seating dimension parameters with sketch. **07**
- OR**
- Q.5** (a) Write a short note on "crash test". **07**
(b) Explain briefly GRP and FRP used in automobile body. **07**
