

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

B E Sem-VI Examination May 2011

Subject code: 160205

Subject Name: Automobile Chassis & Body Engineering

Date: 23/05/2011

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 typical car body construction with neat sketch. **07**
(b) Explain wind tunnel test of scale model. **07**

- Q.2** (a) Explain how car bodies are classified? **07**
(b) Explain in brief various body optimization techniques and Aerodynamic Aids for Optimization of drag. **07**

OR

- (b) Explain design of automobile body for safety. **07**

- Q.3** (a) Explain passenger seat dimensions and seat layout. **07**
(b) Explain various safety aspects incorporated in modern cars. **07**

OR

- Q.3** (a) Explain methods of improving visibility and space in car body. **07**
(b) Write short note on heating and ventilation systems in car body. **07**

- Q.4** (a) Explain conventional and integral coach type bus body construction. **07**
(b) Write short note on bus body layout. **07**

OR

- Q.4** (a) Explain methods for elimination of body noises. **07**
(b) Write brief notes on “Chassis frame design”. **07**

- Q.5** (a) Explain shear panel method for determining stress analysis and body loads. **07**
(b) State and explain various forces and moments acting on auto vehicle. **07**

OR

- Q.5** (a) List different vehicle body materials and explain any three on them. **07**
(b) Write short note on selection of body paint. **07**
