

GUJARAT TECHNOLOGICAL UNIVERSITY**B. E. - SEMESTER – VI • EXAMINATION – WINTER 2012****Subject code: 160205****Date: 07/01/2013****Subject Name: Automobile Chassis and Body Engineering****Time: 02.30 pm - 05.00 pm****Total Marks: 70****Instructions:**

1. Attempt any five questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) Explain Asymmetric Vertical Loads acting on Vehicle. **07**
(b) What is Drag? Explain various body optimization techniques used to reduce Drag. **07**

- Q.2** (a) Explain properties and use of following materials: **07**
1. Composite Materials
2. FRP
(b) Describe with neat sketch, the dimensions of Driver's seat in relation to various controls. Also explain Driver's seat arrangement for various vehicles. **07**

OR

- (b) Explain various types of tests carried out in wind tunnel. **07**

- Q.3** (a) Explain water leakage testing of vehicle. **07**
(b) Define Blind Spot. Describe various methods to reduce blind spot in sedan car. **07**

OR

- Q.3** (a) State the sources of body noise. Also describe testing and elimination methods for body noise. **07**
(b) State and explain various types of body optimization techniques to reduce aerodynamic lift. **07**

- Q.4** (a) Elucidate the concept of an idealized load carrying structure. **07**
(b) Write a short note on safety requirements for vehicle body. **07**

OR

- Q.4** (a) Describe the construction of door and dash board. **07**
(b) Write short note on types of body for commercial vehicles. **07**

- Q.5** (a) Explain in detail: Paint procedure carried out on vehicle. **07**
(b) Briefly explain various moments arise on vehicle due to aerodynamic forces. **07**

OR

- Q.5** (a) Explain difference between toughened glass, sheet glass and laminated glass. **07**
(b) Describe car body construction. **07**
