

Roll No. 

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(Automobile Engineering) (2011 Onwards) (Sem.-5)

**VEHICLE BODY ENGINEERING**

Subject Code : BTAE-501

Paper ID : [A2061]

Time : 3 Hrs.

Max. Marks : 60

**INSTRUCTIONS TO CANDIDATES :**

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

**SECTION A****1. Write briefly :**

- a. Define the term yawning.
- b. Explain the importance of vehicle body design.
- c. List the special features of Limousine and Estate Cars.
- d. How the forward and rearward visibility of a vehicle can be improved?
- e. Indicate the seating dimensions for the driver of a passenger car.
- f. What are the various drag forces acting on the vehicle body?
- g. What is meant by a Wind tunnel? How are they classified?
- h. Explain Compact driver's cab design.
- i. What is a F.R.P? Indicate its merits and demerits as body material.
- j. What is meant by body trim?

### **SECTION B**

2. Explain the design and construction of Integral bus.
3. Explain in brief various safety equipments of a car.
4. Explain the construction of underbody, scuttle panel and bonnet of a passenger car.
5. What are the various aerodynamic forces and moments that act on a car body?
6. a) Indicate bus body regulation for design and construction.  
b) Explain the construction of conventional bus body with relevant sketches.

### **SECTION C**

7. Explain the important aspects of tanker body construction.
8. Discuss in detail the selection of paint for vehicles. Explain various anti-corrosion methods.
9. Explain the important aspect of tanker body construction.