

Roll No

AU - 804

B.E. VIII Semester

Examination, June 2016

Vehicle Body Engineering

Time : Three Hours

Maximum Marks : 70

- Note:** i) Answer five questions. In each question part A, B, C is compulsory and D part has internal choice.
ii) All parts of each questions are to be attempted at one place.
iii) All questions carry equal marks, out of which part A and B (Max.50 words) carry 2 marks, part C (Max.100 words) carry 3 marks, part D (Max.400 words) carry 7 marks.
iv) Except numericals, Derivation, Design and Drawing etc.

1. a) Discuss different loading conditions of a vehicle.
b) Enlist different types of vehicle bodies and explain any two.
c) What are the different methods for improving the visibility in cars?
d) Explain in detail the car body construction of a convertible with neat sketch.

OR

Write short note on active and passive safety equipment of a vehicle.

2. a) What is scale model testing?
b) How the aerodynamic resistance of a vehicle can be reduced?
c) Give the reasons for vehicle body optimization.
d) What are the various types of forces and moments acting on the vehicle explain with figure.

OR

How the wind tunnel testing of a vehicle is done and why it is required?

3. a) What factors are to be considered for determining the floor height of a vehicle?
b) Give difference between conventional and integral type of construction.
c) Discuss the shear panel method for vehicle body.
d) Write short note on double skin construction and what are the advantages of double skin construction.

OR

Explain in detail different types of bus body layout with figure.

4. a) What are the various loads acting on the vehicle body?
b) Differentiate between Flat platform and fixed side platform of a vehicle body.
c) What are the factors that should be considered for designing the driver's cabin?
d) Describe the structure of tanker body with neat sketch.

OR

Discuss dimensions of driver seat in relation to controls.

5. a) Discuss, why car trimming is done.
b) Enlist the different types of plastic used in the interior work of the vehicle.
c) How the asymmetrical vertical load effects the body structure of a vehicle.
d) Describe the various technique used for preventing corrosion in vehicle structure.

OR

Briefly explain various stages involved in painting of body structure of an automobile.
