

Name:

Enrolment No:



UNIVERSITY OF PETROLEUM AND ENERGY STUDIES

End Semester Examination, May 2020

Programme Name: B.Tech ADE

Semester : VIII

Course Name : Vehicle Body Engineering

Time : 03 hrs

Course Code : ADEG 301

Max. Marks: 100

Nos. of page(s) : 1

Instructions:

SECTION A

(6*5 Marks = 30)

1. Explain the general classification of the automobiles. List any 10 car body parts.
2. Describe different materials used as body material in automobile also mention their location of use.
3. Describe the importance of drivers' visibility from the safety point of view
4. Explain vehicle aerodynamics and its significance.
5. Define the following terms
 - a) Power Bulge
 - b) Body Sill
 - c) Hard and Soft trims
6. Explain upholstery. List out the basic upholstery required in a car.

SECTION B

(10*5 Marks = 50)

7. Explain wind tunnel testing in detail with the help of diagrams and comment on the purpose of the test.
8. Discuss in detail different aerodynamic forces and moments experienced by a vehicle.
9. Analyze different techniques used to measure the wind drag on the car.
10. Classify different buses bodies and explain the conventional & integral bus body construction.
11. Discuss in detail following commercial vehicles:
 - a. Flat platform
 - b. Tipper
 - c. Tanker
 - d. Box van

SECTION C

(1*20 Marks = 20)

12. Summarize all the important aspects of truck body through which the economy/performance can be increased.

OR

Categorize commercial vehicle on the basis of their body type, explain any four types of commercial vehicles in detail.

