



10AU72

Seventh Semester B.E. Degree Examination, June/July 2019
Vehicle Body Engineering and Safety

Time: 3 hrs.

Max. Marks:100

Note: Answer any FIVE full questions, selecting atleast TWO questions from each part.

PART - A

- 1 a. With a neat sketch, explain the layout of bus and coach bodies. (10 Marks)
b. Explain the various methods of construction. (10 Marks)
- 2 a. Briefly describe the use of glass in vehicle body construction. (10 Marks)
b. Discuss the various types of plastics used in the construction of vehicle. (10 Marks)
- 3 a. With suitable graph, explain the various aerodynamic drag forces. (10 Marks)
b. With relevant sketch, explain the working of wind tunnel. (10 Marks)
- 4 a. Explain the load distribution in a truck with suitable figure. (10 Marks)
b. Explain the various types of body structures. (10 Marks)

PART - B

- 5 a. With labeled diagram, explain the position of driver's seat for various types of vehicles. (10 Marks)
b. Explain the position of driver and crew of a truck in relation to the engine. (10 Marks)
- 6 a. Explain the longitudinal and lateral stability of the vehicle, with suitable sketch. (10 Marks)
b. Discuss the mass distribution and engine location on stability. (10 Marks)
- 7 a. Explain the sources of vehicle noise. (10 Marks)
b. Explain the various methods of noise elimination. (10 Marks)
- 8 a. With relevant sketch, explain the deformation behaviour of vehicle body. (10 Marks)
b. Explain the various safety equipments used in the vehicle body construction. (10 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.