

N.B. (1) Question No. 01 compulsory.

(2) Attempt any three questions out of remaining five questions.

(3) Justify your answer with neat sketches.

Q. 01 Attempt any five out of six.

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i) What are the advantages of different locations of power plant?

ii) Explain Bending load on vehicle?

iii) What are the requirements of Passenger seat?

iv) Explain the aerodynamics consideration for the vehicle.

v) What are different types of truck bodies?

vi) Explain ULSAB Design.

Q. 02 A) Classify the motor vehicle with neat sketches.

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B) Explain methods improving visibility and space in cars.

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Q. 03 A) Explain various body optimization techniques for minimum drag.

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B) Explain Static loading case, Asymmetric loading case, longitudinal loads and Side Load case for the vehicle.

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Q. 04 A) Explain in brief commercial vehicle body details.

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B) How to calculate the center of gravity for the vehicle.

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Q. 05 A) Explain the properties of vehicle body materials.

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B) Explain methods of preliminary design of Passenger Car.

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Q. 06 A) Explain the recent trends in body design with respect to safety consideration.

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A) Sketch and explain school bus body layout.

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