

**October 2018**

Time – Three hours  
(Maximum Marks: 75)

*[N.B: (1) Q.No. 8 in PART – A and Q.No. 16 in PART – B are compulsory.  
Answer any FOUR questions from the remaining in each PART – A  
and PART – B*

*(2) Answer division (a) or division (b) of each question in PART – C.*

*(3) Each question carries 2 marks in PART – A, 3 marks in Part – B  
and 10 marks in PART – C. ]*

PART – A

1. What is convertible?
2. What is the gas used in air bags?
3. What is mini bus?
4. What is the use of tipper body?
5. Name the various types of moments.
6. What is corrosion resistant?
7. What are pick tools?
8. What is forward control?

PART – B

9. Discuss about drivers visibility test.
10. What is the necessity of motor vehicle body?
11. Write about articulated vehicle.
12. Draw the bus body and name the parts.
13. Write about HCV bodies.
14. What do you mean by vehicle aerodynamic drag?
15. What are the advantages of GRP as body materials?
16. Give any three effects of side winds.

PART – C

17. (a) Explain with the sketches the various types of car bodies and their special features.

(Or)

- (b) Bring out the importance of safety in body design. Explain various safety equipments and methods.

18. (a) (i) Explain conventional type bus body construction.  
(ii) Explain integral type construction with a sketch.

(Or)

- (b) Explain about floor height and different engine location, entrance and exit location in bus body construction.

19. (a) Explain the different types of commercial vehicle bodies with sketches.

(Or)

- (b) (i) Explain the tanker body construction with a diagram.  
(ii) Write about driver cabin design.

20. (a) Explain briefly about the effects of various forces and moments on a vehicle.

(Or)

- (b) (i) Explain the method of wind tunnel testing and their types.  
(ii) Explain about the vehicle aerodynamics and their objectives.

21. (a) (i) What do you mean by cathode protection? Explain any one type.  
(ii) Write the general procedure for installing new rear quarter panel assembly.

(Or)

- (b) Explain about the modern painting processes in vehicle bodies.

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