

22561

23242

3 Hours / 70 Marks

Seat No.

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- Instructions :**
- (1) All Questions are *compulsory*.
 - (2) Illustrate your answers with neat sketches wherever necessary.
 - (3) Figures to the right indicate full marks.
 - (4) Assume suitable data, if necessary.
 - (5) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

1. Attempt any FIVE of the following :

2 × 5 = 10

- (a) Define the terms Aerodynamic drag and lift.
- (b) State the various materials used in automobile body manufacturing.
- (c) Enlist painting tools and equipments.
- (d) State the types of minor body repair.
- (e) State any four defects of painting.
- (f) State the types of air-bags with their purpose.
- (g) State any two types of proximity sensors with their application.

2. Attempt any THREE of the following :

4 × 3 = 12

- (a) Enlist the major parts of a car body with their functions.
- (b) Draw the simple layout for citybus and state the factors to be considered during selecting the body.
- (c) Explain the methods of reducing aerodynamic drag for a car body.
- (d) Explain wind tunnel test with its significance.



- 3. Attempt any THREE of the following :** **4 × 3 = 12**
- (a) Write the names of body refinishing materials used in body shop with their importance.
 - (b) Explain the necessity of streamlining of automobile body.
 - (c) State any four body shop equipments with their use.
 - (d) State the causes and remedies for cracking and shrinking defects in body painting.
- 4. Attempt any THREE of the following :** **4 × 3 = 12**
- (a) Explain side swipe collision of a car with simple sketch.
 - (b) Describe crash test for new car with its purpose.
 - (c) Explain working of GPS system in automobile with its significance.
 - (d) Explain procedure of repairing of rusted body panels.
 - (e) Describe the pedestrian detection feature in a car with its importance.
- 5. Attempt any TWO of the following :** **6 × 2 = 12**
- (a) Explain spray painting method and list major required equipments.
 - (b) Select relevant methods for removing a dent of a car body with justification.
 - (c) Justify the use of plastic in automobiles along with its applications.
- 6. Attempt any TWO of the following :** **6 × 2 = 12**
- (a) Describe with neat sketch the damages in car body due to front end collision.
 - (b) Describe the repainting procedure of old car. List the major tools and equipments.
 - (c) Explain working of Air bag used in car with simple sketch.
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