

22561

12425

3 Hours / 70 Marks

Seat No.

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- Instructions :**
- (1) All Questions are *compulsory*.
  - (2) Answer each next main Question on a new page.
  - (3) Illustrate your answers with neat sketches wherever necessary.
  - (4) Figures to the right indicate full marks.
  - (5) Assume suitable data, if necessary.

**Marks**

**1. Attempt any FIVE of the following :**

**10**

- (a) State the resistances faced by the moving vehicle.
- (b) List types of glasses and give it's application in automobile bodies.
- (c) State four power tools used in automobile workshop with their use.
- (d) State four major body repairs.
- (e) List any two paint methods alongwith their significance.
- (f) Give two security systems used in a modern car with their importance.
- (g) State types of seat belts with application.

**2. Attempt any THREE of the following :**

**12**

- (a) Compare conventional auto body with unitized body.
- (b) Describe classification of four wheeler auto bodies according to shape.
- (c) Explain the necessity of streamlining of auto bodies with sketches.
- (d) Explain with neat sketch wind tunnel testing of car body.



- 3. Attempt any THREE of the following : 12**
- (a) List the types of glasses used in automobile and explain construction of any one.
  - (b) State the methods to minimize the aerodynamic drag force in car body.
  - (c) State four safety precautions for handling body shop equipments with justification.
  - (d) Explain with relevant justification body repair by filler-forming with solder.
- 4. Attempt any THREE of the following : 12**
- (a) Describe with sketches the damages in car body due to front end collision.
  - (b) Explain the importance of GPS.
  - (c) Explain tyre pressure monitoring system.
  - (d) Suggest suitable processes for repairing rusted body panels with justification.
  - (e) Explain application of tyre pressure monitoring system with relevant justifications.
- 5. Attempt any TWO of the following : 12**
- (a) Justify the use of plastic parts in automobile alongwith it's applications.
  - (b) Explain the use of electronic straightening and measuring system with relevant justification.
  - (c) Describe the body refinishing materials with justification.
- 6. Attempt any TWO of the following : 12**
- (a) Explain protective and anti-corrosive methods used in automobile alongwith their significance.
  - (b) Explain the process of panel replacement in automobile.
  - (c) Describe body painting procedure of new vehicle.
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