

22656

23124

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.
- (6) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

- 1. Attempt any FIVE of the following :** **10**
- a) Enlist the four types of vehicle layout.
- b) State any two function of Gear box in automobile.
- c) Define :-
- i) Caster
- ii) Camber
- d) State different types of Rims.
- e) State any two functions of Battery.
- f) Define :-
- i) Public Service Vehicle.
- ii) Transport vehicle.
- g) Name any four major components of transmission system used in automobile.

P.T.O.

- 2. Attempt any THREE of the following :** **12**
- a) Classify automobiles on the basis of :-
 - i) On the basis of fuel used.
 - ii) On the basis of capacity.
 - iii) On the basis of Transmission.
 - iv) On the basis of Drive.
 - b) Explain working of semi floating rear axle with neat sketch.
 - c) Explain working of master cylinder with neat sketch.
 - d) Describe working of wishbone type suspension system with neat sketch.
- 3. Attempt any THREE of the following :** **12**
- a) Draw and explain vehicle layout of four wheel drive.
 - b) Explain working of rack and pinion type gear box with neat sketch.
 - c) Describe tubeless tyre with neat sketch.
 - d) Explain working of battery ignition system with neat sketch.
- 4. Attempt any THREE of the following :** **12**
- a) Compare CNG vehicle with LPG vehicle on the basis of following parameters :-
 - i) Energy content of fuel.
 - ii) Density
 - iii) Chemical formula of fuel.
 - iv) Application
 - b) Enlist type of sensors used in modern vehicle and state their function. (any four)
 - c) List the various responsibilities of service supervisor in service station.
 - d) Describe colour codes used in automobile wiring system.
 - e) State the four objectives of motor vehicle Act 1988.

5. Attempt any TWO of the following :**12**

- a) Explain construction and working of Epicyclic gear box with neat sketch.
- b) Draw the layout of air braking system. Explain it's working.
- c) State wheel Balancing and wheel Alignment Describe it's procedure.

6. Attempt any TWO of the following :**12**

- a) Explain construction and working of differential with neat sketch.
 - b) List the main component of lead acid battery. Explain it's construction with neat sketch.
 - c) Explain different types of vehicle maintenance.
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