

315372

25226

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 answer with neat sketches wherever necessary.
 - (4) Figures to the right indicate full marks.
 - (5) Assume suitable data, if necessary.
 - (6) Use of Non-programmable Electronic Pocket Calculator is permissible.
 - (7) 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) State the functions of clutch.
 - b) Enlist the main components of automobile.
 - c) State function of universal and slip joint in propeller shaft.
 - d) State the function of chassis.
 - e) State any two functions of Gear Box in automobile.
 - f) Define:
 - i) Toe-in
 - ii) Toe-out
 - g) State the functions of wheel in automobile.

P.T.O.

- 2. Attempt any THREE of the following: 12**
- a) Draw general layout of front engine front wheel drive car.
 - b) State the requirements of steering systems.
 - c) Describe with neat sketch single plate clutch.
 - d) Describe working of MacPherson suspension system with neat sketch.
- 3. Attempt any THREE of the following: 12**
- a) Explain different types of automobile Chassis.
 - b) Differentiate between disc brake and drum brake.
 - c) State different types of rear axle. Explain working of any one.
 - d) Describe with neat sketch the construction and working of leaf spring.
- 4. Attempt any THREE of the following: 12**
- a) List components of vehicle counted in sprung and un-sprung weight.
 - b) Write any four advantage of tubeless tyre over tube tyre.
 - c) Explain with neat sketch working of constant mesh gear box.
 - d) State the advantage of LPG and CNG operated engines.
 - e) Explain battery ignition system for four cylinder engine.
- 5. Attempt any TWO of the following: 12**
- a) Why differential is used in automobile. Explain working of differential.
 - b) Explain with neat sketch working of Telescopic shock absorber.
 - c) Enlist various colour code used in wiring system. State its necessity.
- 6. Attempt any TWO of the following: 12**
- a) Describe pneumatic braking system with neat sketch and state its advantages.
 - b) State and explain different forces acting on the vehicle body related to aerodynamics.
 - c) Draw neat sketch of overdrive and explain its working.
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