

22559

24225

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) 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 features of single cradle frame.
 - b) State the function of frame.
 - c) State any four types of mufflers used in two wheeler.
 - d) State the function of carburettor.
 - e) Define :–
 - i) Trail
 - ii) Caster angle
 - f) State the different selection criteria for wheel.
 - g) State two benefits of twin spark ignition system.

P.T.O.

- 2. Attempt any THREE of the following:** **12**
- a) Describe double cradle frame with sketch.
 - b) Draw a block diagram of wet sump pressurized lubrication system.
 - c) Sketch gas filled shock absorber and describe its working.
 - d) Describe working of constant mesh gear box with neat sketch.
- 3. Attempt any THREE of the following:** **12**
- a) Describe push rod overhead valve operating mechanism with neat sketch.
 - b) Describe the working of two wheeler charging system with neat sketch.
 - c) State the significance of the following:–
 - i) LED light in tail lamp
 - ii) Tachometer at the dashboard.
 - d) Compare kick start and button start arrangement on the basis of effort, battery, convenience and maintenance.
- 4. Attempt any THREE of the following:** **12**
- a) State any four good driving habits.
 - b) State use of –
 - i) Day night goggle
 - ii) Mud guard.
 - c) State importance of ground clearance for motorcycle.
 - d) Describe the ergonomic aspects of handle bar position.
 - e) Explain effect of shape of fuel tank in motorcycle aerodynamic.

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

- a) Select a material for a frame of 350cc motorcycle and justify its use.
- b) Explain carburetor working under various engine operating conditions.
 - i) Idling
 - ii) Starting
 - iii) Acceleration
 - iv) Normal running.
- c) Draw a neat sketch of catalytic converter and describe its working.

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

- a) Explain with sketches effect of steering geometry on vehicle performance.
 - b) Describe the working of multi plate clutch.
 - c) Explain working capacitor discharge ignition system with neat sketch.
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