

17521

16172

3 Hours / 100 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) 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:** **20**
- a) Describe Monocoque construction of the two wheeler body.
 - b) Explain vacuum operated fuel supply system.
 - c) State four advantages of electronic fuel injection system.
 - d) Why caster angle is provided in the steering? Explain its purpose.
 - e) Compare the drum and disc brake of two wheeler.
 - f) Draw the block diagram of the microprocessor controlled ignition system.

P.T.O.

- g) Write the importance of following in aerodynamics:
- (i) Head lamp shape
 - (ii) Tail lamp arrangement.

2. Attempt any FOUR of the following: 16

- a) What are the types of two wheeler drive? Draw any one.
- b) Explain the arrangement of ports of Two Stroke Engine.
- c) State the advantages of multiple valves in Four Stroke Engine.
- d) Describe Handle bar arrangement with neat sketches for steering.
- e) Specify the scooter tyre and explain the term used for specification.
- f) List out the components of starting system and write their functions.

3. Attempt any FOUR of the following: 16

- a) What are the types of two wheeler frames? Explain any one.
- b) Describe the tail pipe arrangement of exhaust system with neat sketches.
- c) Draw the block diagram of Exhaust Gas Recirculation and label it.
- d) State four advantages of gas filled shock absorber for gear and suspension.
- e) Explain Hydraulic brake with neat sketch.
- f) Write down the Benefits of Twin-Spark Ignition system.

4. Attempt any TWO of the following: 16

- a) Explain the working of constant mesh gear box with neat sketch and compare its working with four wheeler Gear box.
- b) State the types of Air filter used in two wheeler and explain the construction of any one with neat sketch.
- c) Draw a schematic circuit of charging system and explain its working.

5. Attempt any TWO of the following:**16**

- a) What is catalytic convertor? Explain its working with neat sketch.
- b) Explain the working of Condenser Discharge Ignition (CDI) system and write its merits.
- c) State the importance of :
 - (i) Crash bar
 - (ii) Saree-guard
 - (iii) Jacket
 - (iv) Helmet

6. Attempt any TWO of the following:**16**

- a) State the use of :
 - (i) LED lights
 - (ii) Reflector
 - (iii) Speedometer
 - (iv) Trip meter
 - b) Describe the ergonomic aspects of :
 - (i) Rider and pillion rider seat
 - (ii) Handle bar position
 - (iii) Floor/Foot rest for driver
 - (iv) Floor/Foot rest for pillion rider
 - c) Explain the Aesthetic Aspects of :
 - (i) Head lamp fairing
 - (ii) Side panels for scooter
 - (iii) Ground clearance
 - (iv) Mud guard shape and position
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