

314344

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 answers with neat sketches wherever necessary.
 - (4) Figures to the right indicate full marks.

Marks

1. Attempt any FIVE of the following :

5 × 2 = 10

- (a) List the various types of frames used in two wheelers.
- (b) State any two functions of Air filters.
- (c) State any two factors which affects selection criteria for two wheeler engine.
- (d) Define the term Castor angle.
- (e) State the types of drives used in two wheeler transmission.
- (f) State the function of Trip meter and Horn.
- (g) State the functions of Exhaust system.

2. Attempt any THREE of the following :

3 × 4 = 12

- (a) Describe the constructional features of Single Cradle frame.
- (b) Describe the working of valve operating mechanism used in two wheeler.
- (c) Explain the working of monotube telescopic shock absorber.
- (d) Describe the working of microprocessor controlled ignition system.



3. Attempt any THREE of the following : **3 × 4 = 12**

- (a) State the importance of crash bar and saree guard in 2 wheeler.
- (b) Compare kick start and button start arrangement in two wheeler on the basis of effort, battery, arrangement and convenience.
- (c) Describe the working of CVT mechanism.
- (d) Explain the working of Electronic Fuel Injection System.

4. Attempt any THREE of the following : **3 × 4 = 12**

- (a) Describe ergonomic aspects of seat arrangement in 2 wheeler.
- (b) State and explain the different types of materials that can be used for frame.
- (c) Describe the working of dry sump lubrication system used in two wheeler.
- (d) Compare drum brake and disc brake, on the basis of design, effort required, external lubrication and cost.
- (e) Describe the constructional features of monocoque frame.

5. Attempt any TWO of the following : **2 × 6 = 12**

- (a) Describe the working of charging system with neat sketch.
- (b) Explain the importance of Aerodynamics aspect in two wheeler.
- (c) Describe the effect of Castor angle on steering geometry in two wheeler.

6. Attempt any TWO of the following : **2 × 6 = 12**

- (a) Describe the working of Capacitive Discharge Ignition (CDI) System.
 - (b) "Driver's habits are closely associated with driver's safety." Justify the statement.
 - (c) Illustrate with neat sketch working principle of simple carburettor.
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