

313314

24225

3 Hours / 70 Marks

Seat No.

--	--	--	--	--	--	--	--

- Instructions :**
- (1) All Questions are *compulsory*.
 - (2) Illustrate your answers with neat sketches wherever necessary.
 - (3) Figures to the right indicate full marks.

Marks

1. Attempt any FIVE :

10

- (a) List types of automobile frame section.
- (b) List any four loads acting on the frame.
- (c) List any four types of clutch operating mechanism.
- (d) Draw labelled sketch of clutch plate.
- (e) State the purpose of transfer case.
- (f) List the types of gear box.
- (g) List the types of wheel.

2. Attempt any THREE :

12

- (a) Sketch a layout of rear engine rear wheel drive vehicle and label the component.
- (b) Differentiate between single plate clutch and multiplate clutch.
- (c) Describe with sketch working of constant mesh gear box.
- (d) Illustrate necessity of Automatic Transmission.



- 3. Attempt any THREE :** **12**
- (a) Describe the construction of ladder type conventional frame with neat sketch.
 - (b) Draw neat labelled sketch of gear selector mechanism mounted on the top of the gear box.
 - (c) Describe construction of Inboard Tripod Joints with neat sketch.
 - (d) Differentiate between Torque Tube Drive & Hotchkiss Drive.
- 4. Attempt any THREE :** **12**
- (a) Describe importance of frame section with neat sketch.
 - (b) Describe construction of Overdrive with neat sketch.
 - (c) Describe construction of tubeless tyre with neat sketch.
 - (d) Draw a neat sketch of full floating axle and labelled component (i) Flanged sleeve (ii) Bearing (iii) Casing (iv) Bearing lock nut
 - (e) State any four desirable properties of clutch facing material.
- 5. Attempt any TWO :** **12**
- (a) Illustrate importance of differential in automobile with neat sketch.
 - (b) Describe construction of following clutch component with sketch (i) pressure plate (ii) release lever (iii) throw out bearing
 - (c) Justify “Synchromesh gear box mostly used in Automobile”.
- 6. Attempt any TWO :** **12**
- (a) State the necessity of propeller shaft and differentiate hollow propeller and solid propeller shaft.
 - (b) Describe the construction and working of Hotchkiss drive with neat sketch.
 - (c) Explain following factors influencing on tyre life (i) inflation pressure (ii) road condition (iii) weather condition (iv) driving habit
-