

17618

16117

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) Mobile Phone, Pager and any other Electronic communication devices are not permissible in Examination Hall.

Marks

1. a) Attempt any THREE of the following: 12
- (i) Write safety precautions while using following:
- 1) FIP calibration machine
 - 2) Valve grinder
- (ii) Write functions of following tools and equipments
- 1) Cylinder bore gauge
 - 2) depth gauge
 - 3) Head light aliner
 - 4) Cylinder honing machine
- (iii) State the criterion to decide whether a vehicle component is to be repaired or replaced.
- (iv) What happens if O₂ sensor in MPFI system does not work?

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- b) **Attempt any ONE of the following:** **6**
- (i) Draw a layout required for a garage servicing 10 commercial vehicles per day. List important generalized and specialized equipment required for this garage.
 - (ii) Describe scheduled maintenance procedure for light motor vehicle.
2. **Attempt any FOUR of the following:** **16**
- a) Describe History sheet with format.
 - b) Describe general servicing procedure.
 - c) What is vapour lock in petrol engine? How vapour lock can be removed?
 - d) If a Truck is not climbing hilly section. Write probable four causes and remedies.
 - e) Write procedure of testing fuel injector of MPFI Engine.
 - f) A noise is heard from one or more cylinders of diesel engine. State four probable causes and remedial measures.
3. **Attempt any FOUR of the following:** **16**
- a) Write stepwise procedure to carry out the vacuum test for cylinder with suitable sketch.
 - b) In Automobile Engine, low oil pressure is observed, state any four causes and remedies to rectify it.
 - c) Write stepwise inspection procedure for radiator leakage.
 - d) Write the procedure of inspection and measurement of cylinder wear.
 - e) Write stepwise procedure to carry out the leakage test of cylinder.

4. a) **Attempt any THREE of the following:** **12**
- (i) Write stepwise procedure for checking of thermostat.
 - (ii) Write stepwise procedure for inspection of piston and piston rings.
 - (iii) What is Engine tune up? Write the procedure for engine tune up with help of block diagram.
 - (iv) Write four causes and remedies for clutch slipping.
- b) **Attempt any ONE of the following:** **6**
- (i) What is calibration of FIP? How calibration is carried out on FIP test bench?
 - (ii) List complaints of frame. Describe the procedure to rectify any one of frame complaints.
5. **Attempt any FOUR of the following:** **16**
- a) Write stepwise procedure for checking differential ring gear run-out.
 - b) A technician has observed a noise in the Propeller shaft, State four probable causes and remedies.
 - c) A technician has observed Hard gear shifting, State four probable causes and remedies.
 - d) What is necessity of bearing preload? Write procedure to adjust bearing preload.
 - e) Write stepwise procedure for clutch pedal adjustment with neat sketch.
 - f) Write any four paint defects with sketch.

17618

[4]

Marks

6. Attempt any FOUR of the following:

16

- a) Describe stepwise procedure for removing dent.
 - b) Write procedure of parking brake adjustment.
 - c) Write procedure of inspection and repair of master cylinder.
 - d) Describe procedure of Tyre Retreading.
 - e) A driver has observed steering kick back. State four probable causes and remedial measures.
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