

17618

11718

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) 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) Enlist any two functions of each of following:
 - 1) Torque wrench
 - 2) FIP calibration machine
 - 3) Wheel aligner
 - 4) Arbor press
 - (ii) State four general safety precautions and procedures to be taken while using tools and equipments.
 - (iii) Enlist any four necessities of vehicle maintenance.
 - (iv) Write the procedure of checking oil level and its condition.
- b) Attempt any ONE of the following: 6
- (i) Draw a layout for 'Dent and paint shop' and list tools and equipment required.
 - (ii) Describe general servicing procedure for major assemblies in an automobile.

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- 2. Attempt any FOUR of the following:** **16**
- a) Describe breakdown maintenance for a motor vehicle.
 - b) Draw a format of work order and state its importance.
 - c) Explain meaning of 'workshop layout'. Write facilities and major equipments required for dealer of commercial vehicles.
 - d) Describe the procedure of measurement of cylinder bore wear.
 - e) It is observed that engine is overheated, what will be probable causes? Suggest suitable remedies.
 - f) State the procedure of vacuum test for an engine.
- 3. Attempt any FOUR of the following:** **16**
- a) Describe procedure for checking and servicing of cylinder head.
 - b) Identify causes and remedies for the following fault:
"If starter motor runs but engine does not start."
 - c) Write the procedure for checking and servicing of bent crankshaft.
 - d) Describe pressure testing in cooling system.
 - e) Describe cleaning and testing of mechanical fuel injector.
- 4. a) Attempt any THREE of the following:** **12**
- (i) Describe the procedure of diagnosing External oil leakage in lubrication system.
 - (ii) Describe how phasing of FIP is done?
 - (iii) Describe checking and adjusting of fan belt tension.
 - (iv) Describe checking and servicing of pressure plate surface and thickness.
- b) Attempt any ONE of the following:** **6**
- (i) Write causes and remedies for the following:
 - 1) Gauge indicates High oil pressure.
 - 2) Engine seizure
 - (ii) Describe adjustment of hydraulic brakes.

- 5. Attempt any FOUR of the following:** **16**
- a) Describe the following clutch adjustments:
 - (i) Floor board clearance,
 - (ii) Release fingers
 - b) What is backlash? How will you check backlash in differential ring gear and pinion?
 - c) Identify the causes and remedies for the following trouble: 'Vehicle doesn't move when put in gear'.
 - d) Explain meaning of 'Clutch drag'. Enlist causes and suitable remedies for it.
 - e) Diagnose the fault – 'Noisy Differential'?
 - f) Describe procedure of repainting of a car.
- 6. Attempt any FOUR of the following:** **16**
- a) Write the procedure for inspection of master cylinder.
 - b) Write any four points to be considered in taking care of wheels and tyre.
 - c) Describe how will you remove cracks in chassis frame?
 - d) Explain the procedure of tyre retreading.
 - e) Write causes and remedies for following painting defects.
 - (i) Runs and sags
 - (ii) Cracks
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