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21314

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. A) Attempt **any three** of the following. 12
- a) State any four equipment required for Auto. Workshop with their functions.
  - b) Write the names of necessary records for Auto. Workshop with its usefulness.
  - c) Explain the inspection procedure of cylinder bore for wear and taper.
  - d) Explain the procedure of servicing the lubrication system.
- B) Attempt **any one** of the following. 6
- a) State the troubles of gearbox with its causes and remedies.
  - b) State the troubles for steering system with its causes and remedies.
2. Attempt **any four** of the following. 16
- a) Draw the layout of an Automobile workshop with any specialised job.
  - b) Explain how the preventive maintenance is better than breakdown maintenance.

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- c) Explain any testing procedure for solenoid-operated fuel injector.
- d) Prepare a maintenance schedule for 20 light motor vehicles. Assume a suitable data.
- e) Explain the phasing of fuel injection pump.
- f) Draw the layout for two wheeler dealer. List the required equipments and tools.
3. Attempt **any four** of the following. **16**
- a) Draw the layout for garage for cars. List the required equipments and tools.
- b) Explain the inspection procedure of a crankshaft for its alignment.
- c) Explain the inspection procedure of piston.
- d) Explain the testing procedure of throttle position sensor with voltmeter.
- e) Explain any one method of bleeding of hydraulic brakes.
4. A) Attempt **any three** of the following. **12**
- a) Explain the inspection procedure of connecting rod for its alignment.
- b) State the criteria for deciding whether the automobile component can be repaired or replaced.
- c) State the troubles for petrol engine with its causes and remedies.
- d) Write the procedure for idle speed adjustment of Carburettor.
- B) Attempt **any one** of the following. **6**
- a) State any three troubles for clutch with its causes and remedies.
- b) Explain the tyre retreading procedure.
5. Attempt **any two** of the following. **16**
- a) Explain the clutch adjustment procedures.
- b) Explain the reconditioning procedure for wheel cylinder of hydraulic braking system.
- c) Explain the procedure for wheel balancing with its necessity.
6. Attempt **any four** of the following. **16**
- a) Explain the diesel engine injector testing procedure.
- b) State the probable troubles of MPFI engine and write the causes and remedies for the same.
- c) Enlist the painting defects.
- d) State the probable troubles of suspension system with its causes and remedies.
- e) Describe with neat sketch the importance of tyre rotation.
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