



12172

13141

3 Hours/100 Marks

Seat No.

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

1. A) Solve **any three** of the following : **12**
- a) State the significance of vehicle testing.
 - b) State four vehicle level performance parameter.
 - c) Explain Edurance test of tyre.
 - d) How leakage test of cooling system is carried out ?
- B) Solve **any one** of the following : **6**
- a) Explain the working of Chassis dynamometer with neat sketch.
 - b) Explain the term Noise, Vibration and Harshness in vehicle testing.
2. Solve **any four** of the following : **16**
- a) What is Homologation process ?
 - b) Describe steering characteristics of vehicle.
 - c) Explain draw bar test.
 - d) Explain the pressure test of lubricating oil pump.
 - e) Describe voltage drop test of starter motor.
 - f) Explain inverted vehicle drop test.
3. Solve **any four** of the following : **16**
- a) Explain sand patch and mud patch.
 - b) State the different testing instruments required for testing.
 - c) State four tyre wear patterns with its causes.
 - d) How pressure test of fuel injection pump is carried out ?
 - e) What is production part approval process ?

P.T.O.



4. A) Solve **any three** of the following : 12
- a) How speedometer and odometer test is carried out ?
 - b) What are the different causes of tyre wear and how it is identified ?
 - c) State the importance of vehicle testing.
 - d) Explain calibration and phasing.
- B) Solve **any one** of the following : 6
- a) Write barrier collision test with vehicle acceleration and occupant loading.
 - b) State and explain three moving barrier collision test.
5. Solve **any four** of the following : 16
- a) State any four ARAI Standards.
 - b) What is the meaning of sampling test ?
 - c) Define the term yaw, pitching roll and larch.
 - d) Define the following terms :
 - 1) Acceleration
 - 2) Driveability
 - 3) Gradeability
 - 4) Restartability.
 - e) What is the need of high speed performance test ?
 - f) How oscilloscope test of ignition system is carried out ?
6. Solve **any four** of the following : 16
- a) State any four vehicle ride and handling parameters of vehicle.
 - b) What are the different requirement of testing ?
 - c) How dry and wet test of compression is carried out ?
 - d) Explain Roll over test without collision.
 - e) Wriste specifications of cross country track.
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