

382651(37)

B. E. (Sixth Semester) Examination, April-May 2020

(New Scheme)

(Automobile Engineering Branch)

VEHICLE MAINTENANCE

Time Allowed : Three hours

Maximum Marks : 80

Minimum Pass Marks : 28

Note : Part (a) is compulsory. Solve any two from each part (b), (c) and (d).

Unit-I

1. (a) Write safety precautions in maintenance. 2
- (b) Explain the different type of maintenance schedules in automobile. 7

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- (c) Describe in detail the motor vehicle acts and insurance acts. 7
- (d) What is maintenance records received for heavy vehicle maintenance? 7

Unit-II

2. (a) Write any four special tools required for engine overhauling. 2
- (b) Discuss in detail the inspection and repair procedure for the engine crankshafts. 7
- (c) Briefly explain the step by step engine assembly procedure with important component sketches. 7
- (d) Explain briefly about the removal of engine from the vehicle. 7

Unit-III

3. (a) What do you mean by toe-in and toe-out? 2
- (b) Explain the causes and remedial actions for any four steering system failures. 7

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- (c) Explain any four troubles experienced in hydraulic brake system. 7
- (d) A single plate clutch with both sides effective has outer and inner diameters of 30 cm and 20 cm. The pressure on the clutch facing is not to exceed 100 kPa. Assuming coefficient of friction as 3. Determine the power transmitted by the clutch as a speed of 2500 rev./min. 7

Unit-IV

4. (a) Draw the lighting symbols of : 2
- (i) heater coil
 - (ii) fuse
- (b) Explain with circuit diagram the working of electrical system for a four wheeler. 7
- (c) Explain different types of tests and preventive maintenance of batteries. 7
- (d) Explain briefly about the maintenance of alternators. 7

Unit-V

5. (a) List out the problems that can occur in fuel pump. 2
- (b) Explain lubrication system maintenance with procedure for oil filter replacement. 7
- (c) Discuss in detail the function of fuel supply system in an automotive Diesel engine. 7
- (d) What are the main components of water cooling system for an automotive engine? 7