

2019

Part – II

AUTOMOBILE MAINTENANCE

(Major)

Paper – III

Full Marks – 80

Time : 3 Hours

*The figures in the right-hand margin indicate marks.
Candidates are required to give their answers in
their own words as far as practicable.*

Answer Question No. 1 and other **six** questions taking one question from each group.

1. (a) Write the correct answer : $1 \times 10 = 10$
- (i) While taking a turning force balance the car –
- (a) Magnetic
 - (b) Electric
 - (c) *Centrifugal*
 - (d) None of these

- (ii) M.S. is a –
- (a) Ductile
 - (b) Brittle
 - (c) Forged
 - (d) None of these
- (iii) Carbon contained in steel –
- (a) 0.15 – 1.5%
 - (b) 1 – 1.75%
 - (c) 2.5 – 3%
 - (d) 2 – 4%
- (iv) Name of Aluminium ore is –
- (a) Bauxite
 - (b) Red Hematite
 - (c) Tin
 - (d) None of these
- (v) Maruti 800 car is –
- (a) front engine front drive
 - (b) front engine rear drive
 - (c) Rear engine rear drive
 - (d) None of these

- (vi) While taking a left turn the left wheel of the vehicle revolve at –
- (a) Same r.p.m.
 - (b) Higher r.p.m.
 - (c) Lower r.p.m.
 - (d) None of these
- (vii) Colour of C_2H_2 gas hose pipe of gas welding –
- (a) Red
 - (b) Black
 - (c) Yellow
 - (d) Blue
- (viii) Colour of O_2 gas hose pipe of gas welding –
- (a) Red
 - (b) Black
 - (c) Yellow
 - (d) Blue

- (ix) Melting point of Lead is –
- (a) 227°C
 - (b) 327°C
 - (c) 350°C
 - (d) 400°C
- (x) Moped vehicle is –
- (a) Belt drive
 - (b) Chain drive
 - (c) Gear drive
 - (d) None of these
- (b) Write True or False appropriate the following:
1×5
- (i) If the level of the lubricating oil is too high in the gear-box become hot?
 - (ii) Cupola are used for making Cast Iron?
 - (iii) Blast furnace are used for making Pig Iron?
 - (iv) Central bearing is used in Propeller shaft?
 - (v) Maximum value of piston ratio is +0.5.

- (c) Write short answer of the following : 1×5
- (i) What is Pattern ?
 - (ii) Give the few name of non ferrous metal.
 - (iii) What do you mean by Hotch kiss drive?
 - (iv) What is dog pin ?
 - (v) What is the gear ratio during top gear position ?

Group – A

2. What is clutch? Give the classification of clutch. Describe briefly with suitable sketch of single plate clutch. 2+2+6
3. Describe the clutch trouble and their remedies. Write down few points of good qualities of a clutch. Write down advantages and disadvantages of Hydraulic clutch. 3+3+4
4. Write down about clutch maintenance. What do you mean by clutch direction ? Write short note of clutch release lever adjustment. 4+3+3

Group – B

5. What is gear box? Give the classification of gear box. Write short note of Spure gear, Helical gear, Double Helical gear and Bevel gear. 2+2+6
6. What is the necessity of gear box ? Describe briefly with suitable sketch about sliding mesh gear box. 3+7
7. Write down about the lubrication of a gear-box. What do you mean by over drive transmission? What are the advantages and disadvantages of steering coloum control gear change lever ? 3+2+5

Group – C

8. What is Lathe machine? Give the classification of Lathe machine. What do you mean by group drive ? What are the advantages and disadvantages of group drive. 2+3+2+3
9. Give the classification of welding process. Describe briefly the equipments required for oxy-acetylene welding process. What do you mean by neutral flame and oxidizing flame? 3+5+2
10. What is alloy steel ? Enlist the few alloying element. Describe the process of making steel by open-heart process with suitable sketch. 2+2+6