

AUTOMOBILE ENGINEERING (AE)

UNIT – 1

1. Explain super charging and turbo charging
2. Describe the working of crescent type gear pump and rotor pump with neat sketch?
3. Explain the term Nitriding decarbonisation?
4. Discuss briefly about gear pump and vane pump?
5. What are the requirements of lubricants?
6. Explain different super charges?
7. Draw the layout of four wheels automobile and indicate major components?
8. How higher power is obtained with turbo charging? Explain with pv-diagram?
9. Explain clearly splash lubrication system?
10. Explain different oil filters?
11. What are the objects of lubrication?
12. Discuss briefly about Crescent gear pump. Rotor pump and plunger pump?
13. What is Decarbonisation?
14. Draw and explain pressure lubrication system?
15. What is four wheel drive?
16. How valve can be serviced?
17. Differentiate between super charging and turbo charging?
18. Explain piston rings function, materials, number of rings clearly?

UNIT – 2

1. How A.C mechanical pump pumps the fuel?
2. Explain individual fuel injection system?
3. How petrol can be injected according to location of injector?
4. Explain fuel injection pump in CI engines?
5. Explain S.U Electrical pump with sketch?
6. Explain the working of nozzle and different types of nozzle?
7. Explain the working of fuel feed pump in CI engines?
8. How petrol injection can be done by mechanically?
9. What are the different systems used for the supply of fuel from tank to the engine cylinder?
10. Explain the working principle of simple carburetor?
11. Explain common rail fuel injection system?
12. What are the defects in simple carburetor?
13. What are the functions of carburetor?

14. Explain the filters in diesel engine?
15. How we can test the fuel feed pump?

UNIT – 3

1. What are the advantages of air cooling system?
2. Explain the working of thermo-symphony cooling system?
3. What are the advantages of pressure cap in radiator?
4. Explain the different types of thermostats used in automobile?
5. What are the requirements in Ignition systems?
6. Explain in detail the type of cooling pump used in water cooling pump used un water cooling?
7. What are the requirements of a good spark plug?
8. Compare battery ignition system with magneto ignition system?
9. Explain pulse generator with sketch?
10. What are the different anti-freeze solutions and their requirements?
11. Draw and explain different types contact breakers?
12. Explain the function of the radiator and types of radiator cores?
13. What is spark advance?
14. Describe magneto ignition system with sketch?
15. How speed sensitive fan blade are working?
16. Explain vacuum advance method in automatic ignition advanced method?
17. What is the necessity of expansion reservoir?
18. Explain centrifugal advance method in automatic ignition advance methods?
19. What are the different defects in spark plug?
20. Explain battery ignition system with neat sketch?

UNIT – 4

1. What are the main components in CNG conversion kit?
2. How fuel tank carburetor ventilation reduces the pollutants?
3. What is multi point fuel injection systems S.I engines?
4. Explain the working of catalytic convertor?
5. What are the advantages and disadvantages of alcohols?
6. Explain the two types of techniques for treating the exhaust gases to reduces the pollutants?
7. What are the advantages of CNG?
8. Explain unheated lambda probe with neat sketch?
9. What are the advantages of L.P.G?
10. Explain common rail fuel injection system in diesel engines?
11. Explain the operation of exhaust gas analyser?
12. What are the advantages and disadvantages of Bio-diesel?

UNIT – 5

1. Draw the charging circuit and explain the principle of a D.C generator?
2. Explain the working of a Horncutout relay?
3. Explain clearly the operation of the turn signal light unit?
4. Draw and explain standard Bendix drive or Folothrou drive?
5. How starting motors are constructed?
6. Explain current voltage regulator with neat sketch?
7. Discribe the working of a fuel guage?
8. Explain the construction of D.C generator?
9. Draw the simplified wiring circuit diagram?
10. Draw and explain wind screen wiper?
11. Explain the principle of electrically operated oil pressure guage?
12. Explain starting motor wiring circuit using a solenoid shaft with relay?
13. How head lights are operated and explain neat sketch?

UNIT - 6

1. What are the requirements of clutch?
2. Explain the principle of centrifugal clutch with neat sketch?
3. How clutch can be operated electro magnetically?
4. Explain working of a constant mesh gear box with sketch?
5. How multi plate clutch can be constructed?
6. Explain Epicyclic gear box with sketch?
7. What are the desirable properties of tyre?
8. How we can operate single stage torque converter?
9. What is the principle of differential?
10. Differentiate between the torque tube and Hotch kiss drive?
11. Explain the working of case clutch?