

84/2014

Maximum : 100 marks

Time : 1 hour and 15 minutes

1. Heavy flywheel required in :
(A) Multi cylinder engine (B) Two stroke engine
(C) V-Engine (D) Single cylinder engine
2. In two stroke three cylinder engine, the firing interval of crank shaft is :
(A) 360° (B) 240°
(C) 60° (D) 120°
3. The diameter of inlet valve is :
(A) Same as exhaust valve (B) Greater than exhaust valve
(C) Smaller than exhaust valve (D) $1/4^{\text{th}}$ of exhaust valve
4. Firing order of 4 cylinder 'I'-head engine is :
(A) 1-2-3-4 (B) 1-3-4-2
(C) 1-2-4-3 (D) 1-4-2-3
5. Material used for making cylinder head gasket is :
(A) Copper and asbestos (B) Cork and copper
(C) Sheet of aluminium (D) Asbestos and fibre
6. Engine with equal bore and stroke is called :
(A) Uniform engine (B) Equalised engine
(C) Square engine (D) None of these
7. Vibration damper is mounted :
(A) On flywheel (B) Front end of gear box
(C) Front end of crank shaft (D) Top end of connecting rod

8. Excessive valve stem – guide clearance may cause :
- (A) Valve breakage
 - (B) Noisy valve operation
 - (C) Valve face wear
 - (D) Necking of valve stem
9. Exhaust valve face angle is generally :
- (A) 30°
 - (B) 60°
 - (C) 45°
 - (D) 15°
10. The inlet valve starts opening :
- (A) At TDC
 - (B) At BDC
 - (C) Before TDC
 - (D) After TDC
11. Aluminium alloy is used to make piston for :
- (A) Reduce piston expansion
 - (B) Make the piston stronger
 - (C) Reduce corrosion
 - (D) Reduce piston weight
12. Compression rings are generally made of :
- (A) Steel
 - (B) High carbon steel
 - (C) Aluminium
 - (D) Chromium
13. Maximum permissible bearing clearance for the cam shaft is :
- (A) 0.05 mm
 - (B) 0.01 mm
 - (C) 0.5 mm
 - (D) 0.7 mm
14. Cylinder head is tightened by using :
- (A) Spanner
 - (B) Lifting screw
 - (C) Torque spanner
 - (D) Hammer
15. In Radiator, coolant is pumped from :
- (A) Radiator cores
 - (B) Collector tank
 - (C) Upper tank
 - (D) Reservoir tank
16. Thermostat in cooling system is used to :
- (A) Reduce temperature of coolant
 - (B) Protect radiator from bursting
 - (C) Transfer coolant from radiator to engine
 - (D) Maintaining coolant temperature

17. Coolant pump used in automobile is :
- (A) Reciprocating type (B) Vane type
(C) Centrifugal type (D) None of the above
18. Radiator core is made of :
- (A) Steel (B) Copper
(C) Cast iron (D) Plastic
19. The lubrication system commonly used in two stroke engine is :
- (A) Splash (B) Drisump
(C) Pressure (D) Petroil
20. Number of gears used in gear pump is :
- (A) 4 (B) 3
(C) 2 (D) 8
21. One of the reason of high oil consumption in engine is :
- (A) Oil having high viscosity (B) Oil lines clogged
(C) The releaf valve may be struck (D) Incorrect piston ring gap
22. Oil filter should be changed near about _____ kilometers of vehicle run.
- (A) 10,000 (B) 25,000
(C) 50,000 (D) 60,000
23. Oil passes from the oil pump to :
- (A) Oil gallery (B) Main bearings
(C) Oil stainer (D) Oil filter
24. End play of gears of an oil pump is checked by :
- (A) Inside caliper (B) Vernier
(C) Outside caliper (D) Feeler gange
25. Calorific value of gasolines is approximately :
- (A) 40 MJ/Kg (B) 20 MJ/Kg
(C) 90 MJ/Kg (D) 1200 MJ/Kg

26. Diesel knock happens when :
- (A) Ignition delay period increases (B) Ignition delay period decreases
(C) C.R is high (D) None of these
27. Common fuel supply system in two-wheeler is :
- (A) Pressure (B) Pump
(C) Gravity (D) Vacuum
28. Stoichiometric mixture of petrol engine at its ideal condition is :
- (A) 14.6:1 (B) 20:1
(C) 12:1 (D) 1:1
29. The drive for mechanical fuel pump is taken from :
- (A) Cam shaft (B) Crank shaft
(C) Distributor shaft (D) None of these
30. The choke used in petrol engine for :
- (A) Accelerating the vehicle (B) Idling the engine
(C) Stopping the engine (D) Starting the engine
31. The venturi in carburettor is used to :
- (A) Accelerate the engine
(B) Cold starting
(C) Increasing fuel pressure
(D) Increase air velocity for suction of fuel
32. In petrol injection system, the petrol is commonly injected into :
- (A) The port (B) The throttle
(C) Cylinder (D) Venturi
33. An example of constant vacuum type carburettor is :
- (A) Solex carburettor (B) S.U carburettor
(C) Zenith carburettor (D) Carter carburettor

34. The compression ratio of C.I engine is near about :
- (A) 22:1 (B) 7:1
(C) 10:1 (D) 15:1
35. The test used for finding brake power of each cylinder in multy cylinder is called :
- (A) Power test (B) Efficiency test
(C) Morse test (D) Stroke test
36. Brake mean effective pressure in an engine depends upon its :
- (A) Speed (B) Power
(C) Torque (D) Compression ratio
37. Ignition coil is used to :
- (A) Increase the voltage (B) Increase the current
(C) Controls the ignition (D) None of these
38. Condenser in ignition system is mounted :
- (A) In the carburettor (B) On the spark plug
(C) In the distributor housing (D) On the ignition coil
39. The factor which will not effect ignition advance is :
- (A) Speed (B) Load
(C) Engine temperature (D) Battery voltage
40. Hot spark is used in :
- (A) Medium duty engine (B) Heavy duty engine
(C) High speed engine (D) All of the above
41. The primary winding of ignition coil consists of :
- (A) Many turns of thin wire (B) Few turns of thick wire
(C) Many turns of thick wire (D) Few turns of thin wire
42. Spark occurs when :
- (A) C.B. point opens (B) C.B. point closes
(C) Ignition switch is on (D) Primary voltage increases

43. Spark plug having white insulator tip indicates :
- (A) Leaded fuel (B) Gas leak
(C) Retarded ignition (D) Over advanced ignition
44. The number of ignition coils in a distributor less ignition system for a 6 cylinder engine is :
- (A) 1 (B) 6
(C) 2 (D) 3
45. Increasing plate size in lead acid battery increases :
- (A) Voltage (B) Current
(C) Capacity (D) None of these
46. The number of negative plates in lead acid battery is :
- (A) One more than +Ve plate (B) Three more than +Ve plate
(C) One less than +Ve plate (D) Two less than +Ve plate
47. Specific gravity of fully charged battery is :
- (A) 2.30 (B) 1.29
(C) 1.60 (D) 12
48. The negative plate of lead acid battery has :
- (A) Pb (B) PbO₂
(C) Pb₂O₂ (D) SO₄
49. Cadmium test in lead acid battery is to find :
- (A) sp. gravity of electrolyte (B) concentration of H₂SO₄
(C) chemical condition of plates (D) self discharge
50. Internal short circuiting in plates is due to :
- (A) High voltage (B) Overcharging of battery
(C) Plate damage (D) Damaged separators

51. Cut out relay is used to :
- (A) Increase the voltage in circuit
 - (B) Increase the current in circuit
 - (C) Charging of battery
 - (D) Prevent discharge of battery to generator
52. The output of alternator is controlled by :
- (A) Voltage regulator
 - (B) Current regulator
 - (C) Brushes
 - (D) None of the above
53. Growler is used for testing :
- (A) Inertia of bendex
 - (B) Short circuit of armature
 - (C) Clearance of armature
 - (D) Earthing of starter motor
54. Parking distance of a vehicle from fire engine is :
- (A) 2 meter
 - (B) 1 meter
 - (C) 4 meter
 - (D) 1 Kilometer
55. The document which shows the maximum weight that a vehicle can carry :
- (A) Permit
 - (B) Insurance certificate
 - (C) Goods carriage record
 - (D) None of these
56. Should not reverse the vehicle in :
- (A) Ferry
 - (B) Upward gradient
 - (C) One way
 - (D) Railway gate
57. The distance kept by the vehicle in the back of other vehicle running in same direction is :
- (A) 10 meter
 - (B) 5 meter
 - (C) 2 meter
 - (D) 6 meter
58. Number of passengers can travel on the back seat of a motor cycle is :
- (A) 2
 - (B) 1 adult and 1 child
 - (C) 1
 - (D) 0

59. The signal which is not able to show by electric equipment is :
- (A) Overtaking permission (B) Left turn
(C) Stopping (D) Reverse
60. Maximum speed of a motorcycle is :
- (A) 50 km/hr (B) 60 km/hr
(C) 70 km/hr (D) No limit
61. While reaching a junction a vehicle should give preference :
- (A) to left side vehicle (B) rear vehicle
(C) right side vehicle (D) none of the above
62. Yellow line at the center of the road shows :
- (A) Should not overtake
(B) Not allowing heavy vehicle
(C) Should not allow other vehicle to overtake
(D) Should not cross the line
63. Yellow light on automatic signal shows :
- (A) Turn right (B) Should not stop the vehicle
(C) Make ready to move the vehicle (D) Allow other vehicle to overtake
64. The place where the vehicle is not permitted to park :
- (A) Near bus stop (B) Road with downward gradient
(C) Public road side (D) Near to public office
65. Number of person allows on a tractor :
- (A) One (B) Two
(C) Ten (D) None
66. Loose gear on the main shaft in a gear box may cause :
- (A) Easy gear shifting (B) Clash of gears
(C) Gear slipping (D) None of these

67. Increasing of torque in gear box by :
- (A) Decreasing power (B) Increasing power
(C) Decreasing speed (D) Increasing speed
68. Epicyclic gear box is used in :
- (A) Automatic transmission (B) Petrol vehicles
(C) Locomotive engines (D) Heavy vehicle
69. Axle shaft is splinned to :
- (A) Differential cage (B) Sun gear
(C) Crown wheel (D) Propeller shaft
70. Torque transmission at an angle made by :
- (A) Bearings (B) Slide joint
(C) Helical gears (D) Universal joint
71. Fading of brakes occurs :
- (A) During continuous application (B) At high speed
(C) At low speed (D) None of these
72. Shock absorber is used to :
- (A) Take the load of a vehicle (B) Keep the vehicle for stability
(C) Damping the vibration of spring (D) Keep the wheels in same position
73. Inclination of king pin in the plane of tyre is called :
- (A) Castor (B) Camber
(C) Kingpin inclination (D) Toe-in
74. Excessive castor may cause :
- (A) Excessive tyre wear (B) Wheel wobbling
(C) Wheel tramp (D) Hard steering
75. Purpose of tyre rotation is for :
- (A) Avoiding ply separation (B) Reducing uneven wear
(C) Equalising wear (D) Avoiding wheel wobbling