

64/2019

Maximum : 100 marks

Time : 1 hour and 15 minutes

1. In an alternator the magnetic field is produced in the:
(A) Rotor (B) Stator
(C) Frame (D) Regulator
2. What type of dynamo is commonly used in automobiles?
(A) Single pole type (B) Two pole type
(C) Three pole type (D) Five pole type
3. The brushes of dynamo are made of:
(A) Aluminium (B) Carbon
(C) Copper (D) Brass
4. Why the air is cleaner filled with oil?
(A) To lubricate
(B) To prevent dust and dirt from atmosphere
(C) To pressure
(D) To accelerate
5. In diesel cycle combustion takes place in:
(A) Constant pressure (B) Constant volume
(C) Constant temperature (D) Constant temperature and pressure
6. In a turbo charged engine, the air pressure is increased by turbine-compressor driven by:
(A) Crank Shaft (B) Fan pulley
(C) Startor motor (D) Exhaust gases
7. Which of the following conductors is used in bulbs?
(A) Tungsten (B) Carbon
(C) Copper (D) Nichrome

A

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[P.T.O.]

8. Which one of the following given DC supply?
(A) Dynamo (B) Transformer
(C) Alternator (D) Motor
9. The relative density of the electrolyte in a lead acid battery is 1.280. This value indicates that the battery is:
(A) Fully charged (B) Half charged
(C) Three quarter charged (D) None of the above
10. The main purpose of lead-acid battery is to store electrical energy in the form of:
(A) Kinetic Energy (B) Potential Energy
(C) Chemical Energy (D) Mechanical Energy
11. The single phase domestic AC power supply voltage in India is:
(A) 110 V (B) 230 V
(C) 440 V (D) 550 V
12. The power source in a pneumatic system is:
(A) Air receiver (B) Compressor
(C) Valve (D) Muffler
13. Viscosity is an internal property of a fluid. It is a measure of its resistance to:
(A) Current (B) Light
(C) Sound (D) Flow
14. A transformer consists of:
(A) One coil (B) Two coil
(C) Three Coil (D) Four coil
15. Dog clutches are used in:
(A) Gear box (B) Friction clutches
(C) Brakes (D) Differentials
16. The clutch plate assembly has a center steel disc riveted with springs for:
(A) Absorbing shocks (B) Reducing noise
(C) Higher flexibility (D) Higher strength

17. What is another name for throw out bearings:
- (A) Clutch release bearing (B) Turn around bearing
(C) Flywheel bearing (D) Crank shaft bearing
18. The purpose of double declutching when changing down is to:
- (A) Slow down the lay shaft (B) Speed up the lay shaft
(C) Slow down the main shaft (D) Speed up the main shaft
19. The central gear of an epicyclic gear box is called:
- (A) Ring gear (B) Planet gear
(C) Sun gear (D) Internal gear
20. Two meshing gears have 4:1 gear ratio if the smaller gear has 12 teeth the larger will have:
- (A) 12 teeth (B) 24 teeth
(C) 36 teeth (D) 48 teeth
21. Which one of the following is used in manual transmission to avoid the need for double declutching?
- (A) Motor oil (B) Dog clutch
(C) Equalizer (D) Synchronizer
22. The Planetary gear set in automatic transmission is a compound epicyclic planetary gear set its band and clutches are actuated by:
- (A) Pneumatic sensors (B) Hydraulic sensors
(C) Electrical sensors (D) Mechanical sensors
23. A universal joint which is constructed with 2 yokes joined by a cross shaped trunion is called:
- (A) Hookes (B) Lay rub
(C) Drough nut (D) Constant velocity
24. The purpose of slip joint at the front end of a propeller shaft is to allow:
- (A) The shaft to be removed and refitted
(B) The drive to be transmitted through a varying angles
(C) For the change in distance between the gear box and axle
(D) For the variation in speed of the front universal joint.

25. The central portion of a propeller shaft is made from a:
(A) Steel shaft (B) Gun metal shaft
(C) Steel tube (D) Cast
26. In the differentiate the crown wheel is attached to the:
(A) Bevel gear (B) Bevel pinion
(C) Differential case (D) Propeller shaft
27. The distance between adjacent meshing teeth of mating gear is called:
(A) Clearance (B) Pitch line
(C) Back lash (D) Flank
28. Which one of the following gears does not revolve when the vehicle is in straight drive?
(A) Crown wheel (B) Planetary gear
(C) Pinion (D) Sun gear
29. In a fully floating type of axle the vehicle load is taken up by:
(A) Axle housing (B) Tapered roller bearing
(C) Axle shaft (D) Hub
30. The type of wheel which cannot be used with a tubeless type is:
(A) Disc wheel (B) Wire wheel
(C) Split wheel (D) Tight alloy wheel
31. If the tyres wear more on the edges than at the inside, the tyres are:
(A) Property inflated (B) Over inflated
(C) Under inflated (D) Not inflated
32. The shock absorber used in modern cars operates on the principle of:
(A) Pneumatic (B) Hydraulic
(C) Mechanical linkage (D) Centrifugal force
33. An axle is located on a leaf spring by a:
(A) 'u' bolt (B) Spring clip
(C) Centre bolt (D) Shakle pin

34. Rotary motion of the steering wheel is converted to a reciprocating motion by the:
- (A) Track rod (B) Track arm
(C) Stub axle (D) Steering box
35. As applied to steering to abbreviation P.A.S stands for:
- (A) Pump assisted system steering
(B) Pump aided steering
(C) Power activated system steering
(D) Power assisted steering
36. The steering ratio for manual steering of cars is approximately:
- (A) 5 (B) 15
(C) 50 (D) 100
37. In the disc brake the disc is attached to the:
- (A) Piston (B) Caliper
(C) Wheel Hub (D) Steering Knackle
38. Brake shoes are made of:
- (A) Pressed steel (B) Cast aluminum
(C) Plastic fiber (D) Either (A) or (B)
39. Most anti-skid devices are employed on:
- (A) Rear brakes (B) Front brakes
(C) Secondary brakes (D) Parking brakes
40. The purpose of a brake is to:
- (A) Store energy
(B) Change Friction
(C) Convert heat energy to Kinetic energy
(D) Convert Kinetic energy to heat energy
41. The type of reflector used for automobile head lamp:
- (A) Parabolic (B) Spherical
(C) Hyperbolic (D) Elliptical

42. On cars having rack and pinion steering. The gear rack is attached to:
- (A) Relay rod (B) Pitman axis
(C) Cross Shaft (D) Tie rod
43. Front wheel alignment is adjusted by altering:
- (A) Angle of rack arm (B) Length of track rod
(C) Distance between King pins (D) Position of drag link
44. The tilting of the front wheel away from the vertical is called:
- (A) Caster (B) Camber
(C) Toe in (D) Toc-out
45. Sequence of water circulation is:
- (A) Pump-block-head-regulator (B) Pump-radiator-block-head
(C) Pump-radiator-block (D) None of these
46. The connecting rod is made of:
- (A) Cast iron (B) Aluminum
(C) Mild steel (D) Alloy steel
47. The uppermost ring on piston is usually plated with:
- (A) Steel (B) Cast iron
(C) Aluminum (D) Chromium
48. Engine vibration is due to:
- (A) Connecting rods
(B) Uneven weight distribution of crank shaft
(C) Unbalanced piston
(D) All of these
49. The unit of brake power is:
- (A) Kilo Newton (B) Kilowatt
(C) Kilopascal (D) Kilo Newton Meter
50. The pushrod in an engine is located between:
- (A) Camshaft and valve tappet (B) Valve tappet and rocker arm
(C) Valve and valve spring (D) Valve and rocker arm

51. The cooling water does not come in direct contact with cylinder in:
(A) Wet liner (B) Cast iron
(C) Dry liner (D) None of these
52. Compression rings are generally made of:
(A) Cast iron (B) Low carbon steel
(C) High carbon steel (D) Aluminum
53. A hole drilled between the crank shaft main journal and crank pin:
(A) Lubricating connecting rod bearing (B) Balancing the crank shaft
(C) Reducing crank shaft weight (D) Reducing crank shaft vibration
54. The purpose of piston ring is to control:
(A) Oil consumption (B) Combustion pressure
(C) Cylinder wall lubrication (D) All of the above
55. The engine valves are closed by:
(A) Valve spring (B) Cam shaft
(C) Timing device (D) Crank shaft
56. The most commonly used valve in an automobile engine is:
(A) Sleeve valve (B) Rotary Valve
(C) Poppet Valve (D) All of these
57. The engine component which reduces noise of exhaust gases is:
(A) Tall pipe (B) Muffler
(C) Inlet manifold (D) Exhaust pipe
58. The camshaft controls:
(A) Valve timing (B) Valve closing
(C) Valve opening (D) All of these
59. While lapping a valve the lapping compound is applied to its:
(A) Face (B) Stem
(C) Guide (D) Tip

60. The carbon from the cylinder head is removed with:
- (A) Water (B) Caustic Soda
(C) Scarper (D) Soap
61. A push rod is located between:
- (A) Valve and Valve spring (B) Valve and rocker arm
(C) Tappet and rocker arm (D) None of these
62. The material used for cylinder block are:
- (A) Cast iron and steel (B) Cast iron and aluminum
(C) Steel and aluminum alloy (D) Brass and steel
63. Crank shaft converts reciprocating motion in to _____ motion
- (A) Liner (B) Circular
(C) Rotary (D) None of these
64. The ratio between B.H.P and I.H.P is called:
- (A) Thermal Efficiency (B) Engine efficiency
(C) Mechanical Efficiency (D) Power Efficiency
65. A two-stroke engine has port in the:
- (A) Piston (B) Cylinder walls
(C) Piston ring (D) Cork case
66. In which one of the following types of engine has the longest crank shaft:
- (A) Opposed engine (B) Radial Engine
(C) Inline Engine (D) 'V' Engine
67. In a diesel engine the fuel is ignited by:
- (A) A glow plug
(B) A spark Plug
(C) An Injector
(D) Virtue of temperature of compressed air

68. Maruti 800, Alto, Satro and i10 cars are example of:
(A) Van (B) Hach back
(C) Sedan (D) Estate
69. The period during which both the valves remains is called:
(A) Overlap (B) Lag
(C) Lead (D) None of these
70. Which type of a bearing is used in crank shaft?
(A) Ball bearing (B) Shell bearing
(C) Roller bearing (D) Taper roller bearing
71. In which year of first road vehicles was built:
(A) 1770 (B) 1746
(C) 1789 (D) 1885
72. Mini cars have length up to:
(A) 3400 mm (B) 4000 mm
(C) 4500 mm (D) 4700 mm
73. The top portion of piston is called:
(A) Crown or head (B) Piston top
(C) Land (D) Boss
74. Who was invited by 2 stroke engine?
(A) Otto (B) Dugald clerk
(C) Nicholas Joseph cugnot (D) Benz
75. The lubricating oil pump outlet is connected to:
(A) Oil passage in rocker shaft (B) Oil gallery in cylinder block
(C) Timing case inlet union (D) Fitter inlet pipe
76. Water sludge is formed in the crankcase due to mixing:
(A) Fuel and Oil (B) Water and fuel
(C) Water and Oil (D) Water and air

77. Where is pressure relief valve for lubricating system on a diesel engine provided:
- (A) Inlet port of Oil pump (B) Outlet port of Oil pump
(C) Main oil gallery (D) Lubrication oil filler inlet
78. The lubricating oil pressure of engine is adjusted at:
- (A) Pressure gauge
(B) Pressure valve
(C) By pass valve
(D) Main bearing clearance
79. The most commonly used lubrication system in automobile is the:
- (A) Petrol-oil system (B) Pressure system
(C) Dry sump system (D) Splash system
80. In which of the following lubricating system an additional tank is provided:
- (A) Petrol oil lubrication system (B) Dry sump lubrication system
(C) Splash type lubricating system (D) Pressure lubricating system
81. Which part indicates the oil level on the engine sump?
- (A) Feeler gauge (B) Plastic gauge
(C) Oil pressure (D) Dip stick
82. The most important characteristic of a lubricating oil is its:
- (A) Viscosity (B) Physical stability
(C) Chemical stability (D) Resistance against corrosion
83. The radiator core is made of:
- (A) Brass (B) Steel
(C) Cast iron (D) Plastic
84. A pressure cap contains a:
- (A) Pressure valve (B) Thermostat valve
(C) Blow-off valve (D) Pressure and volume valve

85. The thermostat valve is starts to open at about:
- (A) 90°C (B) 80°C
(C) 50°C (D) 20°C
86. What type of pump is used in engine cooling system?
- (A) Vane pump (B) Reciprocating pump
(C) Centrifugal pump (D) Rotary pump
87. If the thermostat is stuck closed .The engine will:
- (A) Warm up slowly (B) Overheat
(C) Fail to start (D) Idle
88. Radiator core should be cleaned by:
- (A) Reverse flushing (B) Top of bottom of core
(C) Outside the fan side (D) Top hose to bottom hose
89. Cooling media to remove heats from an engine is:
- (A) Air only (B) Water only
(C) Air and Water (D) None of these
90. In bellows type thermostat liquid used are:
- (A) Spirit (B) Alcohol or other
(C) Water or petrol (D) None of these
91. Which one of the following parts of diesel engine injector delivers fuel?
- (A) Fuel tank (B) Fuel filter
(C) Engine cylinder (D) Governor
92. A glow plug is:
- (A) A compression device (B) A decompression device
(C) Fitted in the inlet manifold (D) Screwed in the combustion chamber
93. Injectors deliver fuel to:
- (A) Fuel filters (B) Fuel tank
(C) To governors (D) To Engine cylinders

94. Distributor type F.I.P is also called as:
- (A) In-line pump (B) Rotary pump
(C) Low pressure pump (D) Servo pump
95. Hand priming device is useful when:
- (A) The engine is at full speed (B) The engine is at Idling speed
(C) The engine is at full load (D) The engine is at rest
96. Secondary filter in a diesel engine is:
- (A) Amust
(B) Installed between the fuel tank and feed pump
(C) Optional
(D) Not capable of removing water from the fuel.
97. Which of the following content present in the gasoline fuel increases the corrosion of engine?
- (A) Lead (B) Copper
(C) Iron (D) Sulphur
98. In which type of the nozzle having a auxiliary spray hole to assist easy starting under cold condition:
- (A) Long stem type (B) Pintle type
(C) Delay nozzle (D) Pintaux nozzle
99. Running engine should be stopped by operating:
- (A) Relief valve (B) Rack Operating lever
(C) Handle (D) Flywheel
100. In diesel engine fuel feed pump is mounted on:
- (A) Fuel tank (B) Fuel filter
(C) Fuel injection pump (D) Cylinder head

SPACE FOR ROUGH WORK

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