

AUTOMOBILE MCQ

1. In a four stroke engine each cylinder has

- a) One valve
- b) Two valves
- c) Three valves
- d) Four valves

Answer: b

2. In a diesel engine the fuel injection pressure is in the range

- a) 100 to 170 atm
- b) 60 to 70 atm
- c) 30 to 40 atm
- d) 20 to 25 atm

Answer: a

3. The valve is opened as the cam lobe on the cam raises the

- a) Bearing
- b) Piston
- c) Valve lifter
- d) Valve seat

Answer: c

4. Exhaust valve temperature is about

- a) 35 degree celsius
- b) 100 degree celsius
- c) 150 degree celsius
- d) 500 degree celsius

Answer: d

5. The size of the engine intake valve is

- a) Same as that of exhaust valve
- b) Smaller than that of exhaust valve
- c) Larger than that of exhaust valve
- d) Does not depend upon the size of exhaust valve

Answer: b

6. The device used to measure the clearance between the valve and tappet of an IC Engine is

- a) Feeler gauge
- b) Snap gauge

- c) Slip gauge
- d) Micrometer

Answer: a

7. The purpose of valve clearance is to
- a) Allow the valve to expand
 - b) Allow the sliding of valve in the guide
 - c) Ensure that the valve closes fully
 - d) Ensure that the crankshaft is free to rotate

Answer: c

8. The opening and closing of a valve is respectively done by
- a) A cam and a spring
 - b) A spring and a cam
 - c) Gas pressure and cam
 - d) Cylinder vacuum and spring

Answer: a

9. On modern four stroke engines the exhaust valve opens just
- a) Before TDC
 - b) After TDC
 - c) Before BDC
 - d) After BDC

Answer: c

10. On modern four stroke engines the inlet valve opens just
- a) Before TDC
 - b) After TDC
 - c) Before BDC
 - d) After BDC

Answer: a

11. A relief valve is fitted to the main oil gallery of an engine. The purpose of this valve is to
- a) Limit the maximum oil pressure
 - b) Open when the oil is hot
 - c) Maintain the supply if the gallery becomes blocked
 - d) Stop the oil flow to the bearings

Answer: A

12. The transmission system transmits _____ from engine to wheels.
- a) Speed
 - b) Power

- c) Current
 - d) Pressure
- Answer: b

13. Which of the following is not a part of the transmission system

- a) Clutch
- b) Axles
- c) Wheels
- d) Gear box

Answer: c

14. The loads supported by an automobile frame are

- a) Weight of the body, passengers and cargo loads
- b) Torque from engine and transmission
- c) Sudden impacts from collisions
- d) All of the mentioned

Answer: d

15. An automobile chassis does not include which one of the following parts

- a) Shock absorbers
- b) Steering system
- c) Differential
- d) Brakes

Answer: c

16. The electrical system of an automobile contains which of the following

- a) Battery
- b) Alternators
- c) Lighting systems
- d) All of the mentioned

Answer: d

17. Which of these were or are used in automobiles to provide suspension.

- a) Leaf springs
- b) Coil springs
- c) Torsion bars
- d) All of the mentioned

Answer: d

18. What are 'Air Dams'

- a) Spoilers at the front of a vehicle
- b) Spoilers at the rear of a vehicle
- c) Spoilers at the sides of a vehicle
- d) Spoilers at the top of a vehicle

Answer: a

19. What are 'Wings' of a vehicle
- a) Spoilers at the front of a vehicle
 - b) Spoilers at the rear of a vehicle
 - c) Spoilers at the sides of a vehicle
 - d) Spoilers at the top of a vehicle

Answer: b

20. The lid that covers the engine top in a car and situated at the front is called

-
- a) Gill
 - b) Softtop
 - c) Bonnet
 - d) Spoiler

Answer: c

21. An upraised part on the hood which directs the air flow into the engine compartment is called

- a) Spoiler
- b) Hotpipe
- c) Hood scoop
- d) Wings

22. Why 'Bumpers' are used in cars

- a) To reduce the impact in case of low speed collisions
- b) To improve the aerodynamics of a car
- c) To increase the engine performance
- d) None of the mentioned

Answer: a

23. The central portion of the wheel is called

- a) Rim
- b) Scale
- c) Hub
- d) Axle

Answer: c

24. A _____ is a horizontal surface at the back of a car and serves as a lid to the trunk.

- a) Trunktop
- b) Deck
- c) Hood
- d) Backlight

Answer: b

25. A 'bucket seat' can accomodate how many persons

- a) One

- b) Two
- c) Four
- d) None of the mentioned

Answer: a

26. 'Head restraints' are an

- a) Automotive style feature
- b) Automotive safety feature
- c) Automotive performance feature
- d) None of the mentioned

Answer: b

27. In which of the following fuel injector is used?

- a) Compression-ignition engines
- b) Spark-ignition engines
- c) Steam engines
- d) Sterling engines

Answer: a

28. At which stroke the fuel is injected in the CI engine?

- a) Suction stroke
- b) Compression stroke
- c) Expansion stroke
- d) Exhaust stroke

Answer: b

29. Which of the following is the port fuel – injection system?

- a) D – MPFI
- b) L – MPFI
- c) GDI
- d) TBI

Answer: b

30. What is the range of pressure is achieved in the injection pump?

- a) 120 – 200 bar
- b) 10 – 20 bar
- c) 400 – 500 bar
- d) < 10bar

Answer: a

31. In pneumatic governor, which of the following control the amount of vacuum applied to the diaphragm?

- a) Spring
- b) Accelerator pedal
- c) Butterfly valve
- d) Lever

Answer: a

32. A six-cylinder, four-stroke diesel engine develops a power of 200 kW at 2000 revolution per minute. The brake specific fuel consumption is 0.3 kg / kW – h. What is the time for injection if the injection takes place over 20° crank angle?

- a) 1 millisecond
- b) 2 milliseconds
- c) 1.5 milliseconds
- d) 1.66 milliseconds

Answer: d

33. What is the spray cone angle in the Pintle nozzle?

- a) 60°
- b) 15°
- c) 25°
- d) 45°

Answer: a

34. Which of the following is not the part of the injector assembly?

- a) Needle valve
- b) Nozzle
- c) Diaphragm
- d) Compressor spring

Answer: c

35. Which of the following is not the function of the fuel injection system?

- a) Time the fuel injection
- b) Filter the fuel
- c) Atomize the fuel to fine particles
- d) Control the engine speed

Answer: d

36. The cold start injector provides a lean air-fuel ratio.

- a) True
- b) False

Answer: b

37. Which type of lubrication system is used in two-stroke engine?

- a) Mist lubrication system
- b) Wet sump lubrication system
- c) Dry sump lubrication system
- d) Splash lubrication system

Answer: a

38. In most automobiles, which lubrication system is commonly used?

- a) Splash system
- b) Pressure system

- c) Petrol system
 - d) Gravity system
- Answer: b

39. The pressure inside the lubrication system is controlled by _____

- a) Oil pump
- b) Oil filter
- c) Relief valve
- d) Supply voltage

Answer: c

40. What is the need for crankcase ventilation?

- a) To cool cylinder
- b) To cool crankcase
- c) To cool piston
- d) To remove blow-by

Answer: d

41. Why are the detergents used as oil additives?

- a) To increase fire point
- b) To prevent foaming
- c) To prevent sludge formation
- d) To reduce viscosity

Answer: c

42. Which of the following is the most important property of the lubricant?

- a) Density
- b) Thermal conductivity
- c) Viscosity
- d) Melting point

Answer: c

43. Which of the following viscosity indices shows the larger changes in viscosity with temperature?

- a) 50
- b) 100
- c) 45
- d) 10

Answer: d

44. Which of the following of oils is multi-grade oil?

- a) SAE 10W 30
- b) SAE 25W
- c) SAE 10
- d) SAE 20W

Answer: a

45. Which of the following oils has the highest viscosity?

- a) SAE 20
- b) SAE 10
- c) SAE 50
- d) SAE 45

Answer: c

46. The vegetable oils are used as lubricants in the automobiles.

- a) True
- b) False

Answer: b

47. In a disc brake, which component provides the pad-to-disc adjustment?

- a) Bleed screw
- b) Piston
- c) Caliper
- d) Piston seal

Answer: d

48. What is the braking torque at leading shoe if resultant frictional force acts at a distance of 250 mm from the brake drum center, coefficient of friction between the shoe and the drum as 0.5, the free ends of the two shoes are pushed apart with a force of 300 N which is acting at a distance of 320 mm from anchor, and two shoes are anchored together 170 mm away from the brake drum center?

- a) 276.6 Nm
- b) 256.6 Nm
- c) 266.6 Nm
- d) 246.6 Nm

Answer: c

49. On what principle does the braking system in the car work?

- a) Frictional force
- b) Gravitational force
- c) Magnetic force
- d) Electric force

Answer: a

50. Generally which brakes are on the front wheels?

- a) Drum brake
- b) Disk brake
- c) Shoe brake
- d) Double shoe brake

Answer: b

51. If the car is moving on the level road at a speed of 50 km/h has a wheelbase 3 m, a distance of C.G. from ground 700 mm and distance from rear wheels is 1.1 m. Coefficient of friction is 0.7. What is the retardation if the brakes are applied to the rear wheels?

- a) 3.7 m/s^2
- b) 2.7 m/s^2
- c) 1.7 m/s^2
- d) 4.7 m/s^2

Answer: a

52. If the car is moving on the level road at a speed of 50 km/h has a wheelbase 4 m, a distance of C.G. from ground 800 mm and distance from rear wheels is 1.2 m. Coefficient of friction is 0.8. What is the retardation if the brakes are applied to the front wheels?

- a) 3.4 m/s^2
- b) 2.4 m/s^2
- c) 1.4 m/s^2
- d) 4.4 m/s^2

Answer: b

53. If the car is moving on the level road at a speed of 50 km/h has a wheelbase 4 m, a distance of C.G. from ground 800 mm and distance from rear wheels is 1.2 m. Coefficient of friction is 0.8. What is the retardation if the brakes are applied to all wheels?

- a) 7.8 m/s^2
- b) 6.8 m/s^2
- c) 5.8 m/s^2
- d) 4.8 m/s^2

Answer: a

54. The car is moving up on the 12° inclined road with horizontal at 36 km/h which is having wheelbase 1.4 m. The C.G. of the car is 0.9 m above the road. The coefficient of friction is 0.7. What is the retardation of the car if the brakes are applied to all the four wheels?

- a) 8.75 m/s^2
- b) 8.81 m/s^2
- c) 7.71 m/s^2
- d) 6.81 m/s^2

Answer: a

55. The car is moving down on the 14° inclined road with horizontal at 36 km/h which is having wheelbase 1.4 m. The C.G. of the car is 0.9 m above the road. The coefficient of friction is 0.75. What is the retardation of the car if the brakes are applied to all the four wheels?

- a) 4.76 m/s^2

- b) 5.76 m/s^2
- c) 6.76 m/s^2
- d) 7.76 m/s^2

Answer: a

56. The metering valve is used to proportion the braking effect between the front and the rear axle.

- a) True
- b) False

Answer: b

57. The function of crankcase in two stroke petrol engines is

- a) It holds the engine lubricating oil
- b) It forms a pressurised chamber for fuel air mixture
- c) It holds the exhaust gases after combustion
- d) None of the mentioned

Answer: b

58. Connecting rods are generally of the following form

- a) Forged I-section
- b) Forged round section
- c) Cast iron square section
- d) Forged square section steel

Answer: a

59. The purpose of crankcase ventilation is to

- a) Cool the oil
- b) Remove vaporised water and fuel
- c) Supply oxygen to the crankcase
- d) It assists in maintaining the viscosity of oil

Answer: b

60. The escape of burned gases from the combustion chamber past the pistons and into the crankcase is called

- a) Gas loss
- b) Blow by
- c) By pass
- d) Passed gas

Answer: b

61. Connecting rod is attached to the piston by the

- a) Rod cap
- b) Piston pin
- c) Cap bolt
- d) Lower cap

Answer: b

62. Engine pistons are generally made of aluminium alloy because

- a) It is lighter
- b) It is stronger
- c) It has less wear
- d) It absorbs shock

Answer: a

63. Piston compression rings are made of

- a) Cast iron
- b) Steel
- c) Aluminium
- d) Bronze

Answer: a

64. Gudgeon pins are made of

- a) Cast iron
- b) Aluminium
- c) Same material as that of piston
- d) Hardened and ground steel

Answer: c

65. The purpose of a piston pin is that

- a) It prevents the valve from rotating
- b) It links the connecting rod to the crankshaft
- c) It ensure the piston ring to the piston
- d) It connect the piston to the connecting rod

Answer: d

66. When no.1 piston of a four cylinder in line four stroke engine is performing the power stroke, no.4 piston is on the stroke called

- a) Suction
- b) Compression
- c) Power
- d) Exhaust

Answer: a