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1. Which is the headquarter of Theosophical society in India ?
 A) Goa B) Adayar C) Calcutta D) Calicut
2. Founder of “Bashaposhini Sabha”
 A) Sankaran B) Krishnan
 C) Kandathil Varghese Mappilai D) Joseph Ramban
3. Name the magazine started by Basel Mission to familiarize Malayalee with the history and geography of Europe.
 A) Paschimodayam B) Prabhatham
 C) Western society D) Udayam
4. Which Article makes the Supreme Court the defender and guarantor of the Fundamental Rights ?
 A) Article 32 B) Article 51
 C) Article 50 D) Article 51A
5. Which is the 24 Working – Gender Help Desk of Kudumbasree ?
 A) Women guild B) Girl Friendly
 C) Karuthu D) Snehitha
6. Transplantation of Human Organs Act passed in India
 A) 2000 B) 2004 C) 2013 D) 1994
7. In which Part of the Constitution explains the process of “Elections” ?
 A) Part XVII B) Part XXI
 C) Part XV D) Part IX B
8. Name the social reformer whose son was Nataraja Guru
 A) Ayyankali B) Sree Narayana Guru
 C) Chattampi Swamikal D) Dr. Palpu
9. The year in which “Kuttamkulam Satyagraha” took place
 A) 1950 B) 1951 C) 1946 D) 1952
10. Founder of ‘Arya Samajam’
 A) Palpu B) Pandit Karuppan
 C) K. M. Panikkar D) Sankaracharya

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11. Who is the author of "Onnekalkodi Malayalika" ?
A) E.M.S. B) K. Kelappan
C) Vagbhatananda D) Vaikunda Swamikal
12. Leader of 'Pattini Jatha' from Kannur to Madras
A) Ali Musaliyar B) A. K. Gopalan
C) Moidu Maulavi D) P. Krishna Pillai
13. Who is the President of Congress Session held at Amaravathi in 1897 ?
A) E. Ikanda Warriar B) Subhash Chandra Bose
C) Nehru D) C. Sankaran Nair
14. Name the person who died as a martyr in Paliyam Satyagraha
A) Abraham Malpan B) T. K. Madhavan
C) A. G. Velayudhan D) C. Kesavan
15. Name the Diwan who gave permission to Channar Women to wear jackets
A) Lord Rippon B) Col. Macaulay
C) Col. Munro D) Lord Curzon
16. In which year Sree Narayana Guru install Siva idol at Aruvippuram ?
A) 1888 B) 1886 C) 1896 D) 1885
17. In which year Nair Service Society was founded ?
A) 1913 B) 1910 C) 1911 D) 1914
18. In which year the Govt. of India launched Kudumbasree ?
A) 2001 B) 1998 C) 1995 D) 2005
19. Which Article gave special status to Delhi ?
A) Article 20 B) Article 239AA
C) Article 10 D) Article 250
20. Who led "Achipudava Samaram" ?
A) A. Velayudha Panikkar B) Chattambi Swami
C) K. Kelappan D) Sahodaran Ayyappan

A



21. The stroke of an engine is the
- A) Volume of the cylinder
 - B) Length of the connecting rod
 - C) Internal diameter of the cylinder
 - D) Distance between T.D.C. and B.D.C.
22. Engine misfiring is likely to result from
- A) Spark plug gap too small
 - B) Spark plug gap too wide
 - C) Vapours lock in the fuel only
 - D) Incorrect fuel air mixture
23. The function of a first compression ring (top ring) is that it
- A) Increases the combustion temperature
 - B) Creates swirl
 - C) Maintains a seal and prevents the fuel leakage
 - D) Maintains a seal and prevents escape of burned gases and loss of pressure in the combustion chamber
24. Thinner is added to the paint in order to
- A) Make pigments and resin mix easily
 - B) Make paint film hard
 - C) Optimise its viscosity
 - D) None of these
25. The capacity of a battery is usually expressed in terms of
- A) Volts
 - B) Amperes
 - C) Weight
 - D) Ampere hours
26. In a square type engine
- A) Geometrical shape is square
 - B) Diameter and length of piston are same
 - C) Two cylinders are placed horizontal and two vertical
 - D) Stroke length and cylinder bore are same
27. A Traction Control System (TCS) in automobiles controls the
- A) Vibrations on the steering wheel
 - B) Engine power during acceleration
 - C) Torque that is transmitted by the tyres to the road surface
 - D) Stopping distance in case of emergency



36. The auto ignition in a spark ignition engine means
- A) Automatic ignition of the charge at the end of compression
 - B) Ignition induced by the passage of a spark
 - C) Ignition of the charge before the passage of flame front
 - D) Ignition induced to supplement the process of normal combustion
37. Highest Useful Compression Ratio (HUCR) is the highest compression ratio at which the
- A) Engine can run
 - B) Engine gives maximum output
 - C) Engine is most efficient
 - D) Fuel can be used in a test engine without knocking
38. The cetane rating of Diesel fuel is in the order of
- A) 25
 - B) 45
 - C) 70
 - D) 90
39. A four cylinder engine has a capacity of 2.4 litres. The swept volume of one cylinder is
- A) 400 cm^3
 - B) 600 cm^3
 - C) 1200 cm^3
 - D) 2400 cm^3
40. In comparison with a radial tyre, one advantage of a bias ply tyre is
- A) Longer life
 - B) Lower rolling resistance
 - C) Smoother ride at low speeds
 - D) None of these
41. The cetane number of a Diesel fuel is a measure of
- A) Volatility
 - B) Viscosity
 - C) Ignition quality
 - D) Delay period
42. The negative plates of a lead acid battery has
- A) Lead peroxide (PbO_2)
 - B) Spongy lead (Pb)
 - C) Lead sulphate (PbSO_4)
 - D) Sulphuric acid (H_2SO_4)
43. The tilting of the front wheels away from the vertical, when viewed from the front of the car, is called
- A) Camber
 - B) Caster
 - C) Toe in
 - D) Toe out
44. If the valve clearances are excessively large, the problem that can arise is
- A) Overheating of the engine
 - B) Incomplete valve closure
 - C) Fouling of spark plug by gasoline
 - D) None of these



45. For the same maximum pressure and temperature
- A) Diesel cycle is more efficient than Otto cycle
 - B) Otto cycle is more efficient than Diesel cycle
 - C) Both Otto cycle and Diesel cycle are equally efficient
 - D) None of the above
46. Problems caused by the wheel imbalance are
- A) Hard steering and hard ride
 - B) Poor acceleration and hard steering
 - C) Steering wheel vibrations and uneven tyre wear
 - D) Poor acceleration and reduced fuel efficiency
47. The torque converter uses _____ to transfer torque.
- A) Air
 - B) Automatic Transmission Fluid (ATF)
 - C) Gears
 - D) Steel belt
48. The composition of the electrolyte in a fully charged battery is that
- A) The electrolyte is pure distilled water
 - B) The electrolyte is pure sulphuric acid
 - C) The electrolyte is a mixture of 64% distilled water and 36% sulphuric acid by weight
 - D) The electrolyte is a mixture of 90% distilled water and 10% sulphuric acid by weight
49. The air gap between the central electrode and ground (or side) electrode of a spark plug is around
- A) 0.2 mm
 - B) 0.5 mm
 - C) 1 mm
 - D) 1.5 mm
50. The specific gravity of acid in a fully charged battery is generally
- A) 1.00
 - B) 1.28
 - C) 1.82
 - D) 2.81
51. In radial tyres
- A) One ply layer runs diagonally one way and another layer runs diagonally the other way
 - B) All plies run parallel to one another and vertical to tyre bead
 - C) Inner tubes are always used
 - D) None of these



52. The power source for a brake booster is
- A) Exhaust manifold pressure
 - B) Electricity
 - C) The pressure difference between the atmospheric pressure and the vacuum pressure in the intake manifold
 - D) Hydraulic pump
53. The most commonly used Supplementary Restraint System (SRS) component is
- A) Seat belt
 - B) Brake
 - C) Airbag
 - D) Steering
54. It is necessary to maintain the valve clearance as they
- A) Reduce the resistance to sliding that occurs between the cam and the tappet
 - B) Allow for lengthening of the valves owing to the heat of combustion
 - C) Increase the speed at which the valves move up and down
 - D) Make the crankshaft turn smoothly
55. Wheel base of a vehicle is the
- A) Distance between the centres of the front and rear wheels
 - B) Distance between the centres of the front tyres
 - C) Distance between the centres of the rear tyres
 - D) Extreme length of the vehicle
56. The torque available at the contact between driving wheels and road is known as
- A) Brake effort
 - B) Tractive effort
 - C) Clutch effort
 - D) None of these
57. During braking, the brake shoe is moved outward to force the lining against the
- A) Wheel piston or cylinder
 - B) Anchor pin
 - C) Brake drum
 - D) Wheel rim or axle
58. The main function of an exhaust muffler is the
- A) Optimization of exhaust efficiency
 - B) Reduction of exhaust noise
 - C) Reduction of nitrogen oxide in the exhaust gases
 - D) Reduction of the exhaust



59. In Diesel engines, the duration between the time of injection and the time of ignition is called
A) Spill cut-off B) Delay period C) Injection period D) Ignition period
60. An engine has a clearance volume of 100 cm^3 and a swept volume of 800 cm^3 .
The compression ratio is
A) 7 : 1 B) 8 : 1 C) 9 : 1 D) 10 : 1
61. The component in the radiator of an automobile that increases the boiling point of water is
A) Drain plug B) Water jacket C) Vacuum valve D) Pressure cap
62. Which part of the automobile tyre is subjected to greatest flexing action ?
A) Bead B) Side wall C) Shoulder D) Tread
63. The function of a governor in automobiles is to
A) Limit the power B) Limit the vehicle speed
C) Maintain constant engine speed D) Maximise the fuel economy
64. If the spark plug deposit indicates black coating of soot, it indicates that the engine has been generally operating on
A) Too lean mixture B) Stoichiometric mixture
C) Most economical mixture D) Too rich mixture
65. The crescent shaped cavity on the piston head top surface is called as
A) Piston oil hole B) Snap ring C) Valve recess D) Valve clearance
66. The characteristic that is enhanced by the use of cylinder sleeves is
A) Cooling efficiency B) Resistance to wear
C) Lubrication performance D) None of these
67. The antiknock property of compression ignition engine fuel can be improved by adding
A) Tetraethyl lead B) Trimethyl pentane
C) Amyl nitrate D) Hexadecane
68. The major purpose of an electronically controlled automatic transmission is that this type of transmission
A) Eliminates gear clutches
B) Eliminate the gear shaft lever
C) Reduces the number of automatic transmission components
D) Reduces shift shock and achieves more efficient transmission of engine torque



69. In a forced feed lubrication system, the device used to guard against excessive oil pressure, is known as
- A) Release chamber B) Balancer
C) Relief valve D) Stop valve
70. The aspect ratio (expressed in percentage) of the tyre is defined as the ratio of
- A) Section width to section height B) Section height to section width
C) Wheel diameter to section height D) Wheel diameter to section width
71. The advantage of the fuel injection system over the carburettor system is
- A) Improved fuel efficiency B) Improved emission
C) Improved power output D) All of these
72. Which of the following indicates multi-grade oil ?
- A) SAE30 B) API SF C) SAE20 W50 D) API50
73. The compression ratio in petrol engine is kept less than in Diesel engine because
- A) It makes petrol engines lighter
B) Higher or equivalent compression ratio in petrol engines is not possible due to pre-ignition
C) Less compression ratio gives better performance
D) It is just customary to have less compression ratio in petrol engines
74. The service brakes employed in cars are generally operated
- A) Mechanically B) Hydraulically C) Pneumatically D) None of these
75. The self ignition temperature of Diesel as compared to petrol is
- A) Higher B) Lower
C) Same D) Depends on fuel quality
76. The process of supplying the intake air to the engine cylinder at a pressure greater than the pressure of the surrounding atmosphere is known as
- A) Supercharging B) Auto ignition C) Scavenging D) Detonation
77. The caster is called positive when the top of the king pin is inclined to the
- A) Rear of the vehicle B) Front of the vehicle
C) Left of the vehicle D) Right of the vehicle



78. Why are pistons given a coating ?
- A) To increase lubrication effect
 - B) To conduct heat efficiently
 - C) To reduce weight
 - D) To reduce possibility of scoring
79. The function of Positive Crankcase Ventilation (PCV) system is that it
- A) Mixes fuel with air
 - B) Promotes combustion by creating a swirling movement in the air-fuel mixture
 - C) Returns blow by gases from the crankcase to the intake system
 - D) Feeds blow by gases to the exhaust manifold
80. The basic purpose of a Four Wheel Drive (4WD) system is that it
- A) Delivers improved cornering on dry road surfaces
 - B) Eliminates the need of snow tyres, tyre chains, etc.
 - C) Ensures effective transmission of engine torque to all four wheels, even on slippery road surfaces
 - D) Ensures that effective braking can be performed, even on slippery surfaces
81. The timing belt is attached to the camshaft pulley and
- A) Timing belt drive pulley
 - B) Distributor
 - C) Radiator fan pulley
 - D) Alternator pulley
82. When the front wheels of a vehicle are locked during braking, then
- A) Stopping distance becomes extremely long
 - B) Front tyres skid across the road surface and the vehicle spins around
 - C) Rear tyres skid across the road surface and the vehicle spins around
 - D) Driver loses control over the steering and the vehicle continues moving in its current direction
83. The best fuels for compression ignition engines are
- A) Straight chain paraffin
 - B) Aromatics
 - C) Branched chain paraffin
 - D) Naphthalene
84. Damper is also known as
- A) Shock absorber
 - B) Torsion bar
 - C) Spring
 - D) Radius rod



85. The effect of having excess camber is
- A) Excessive steering alignment torque B) Hard steering
C) Too much traction D) Uneven tyre wear
86. If a tyre is designated as 175/65 R-14 82-S, then the aspect ratio for the tyre is
- A) 175 B) 65 C) 14 D) 82
87. In a hydraulic power steering system, the power steering pump is driven by a
- A) Belt driven by camshaft B) Chain driven by crankshaft
C) Belt driven by drive-shaft D) Belt driven by crankshaft
88. The included angle is the sum of the
- A) Camber and castor B) Castor and S.A.I.
C) Camber and S.A.I. D) Camber and toe in
89. Vulcanizing means
- A) Heating rubber under pressure B) Spraying with special paint
C) Melting rubber while stirring it D) None of these
90. When turning a corner
- A) The front wheels are toeing out
B) The front wheels are turning on different angles
C) The inside front wheels has a greater angle than the outside wheel
D) All of the above
91. When a gear box has four forward speeds and one reverse speed, it is said to be a
- A) 3-speed gear box B) 4-speed gear box
C) 5-speed gear box D) 6-speed gear box
92. The basic purpose of providing caster angle on wheels is to
- A) Prevent uneven tyre wear
B) Maintain directional control
C) Bring the road contact of the tyre under the point of load
D) Compensate for wear in the steering linkage



Space for Rough Work



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