

Student Name: _____	Roll No: _____
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1. Which type of the circuit has an infinite resistance?

- A) Parallel closed circuit      B) Open circuit  
C) Series closed circuit      D) Short circuit

- A) Diamond point chisel      B) Cross cut chisel  
C) Flat chisel      D) Half round chisel

2. What is brake horse power?

- A) Power available at the gear box      B) Power available at the wheels  
C) Power available at the cylinder      D) Power available at fly wheel

10. Which is the starting system used in heavy vehicles?

- A) Electric motor cranking      B) Gasoline engine cranking  
C) Compressed air cranking      D) Hand cranking

3. What is the process of driving exhaust gases in two stroke engine out of cylinder?

- A) Intaking      B) Combustion  
C) Super charging      D) Scavenging

11. Which is used to determine the stroke of an engine?

- A) Dia of piston      B) Length of connecting rod  
C) Throw      D) Cycle

4. Which is the compression pressure of C.I engine?

- A) 180 to 280 psi      B) 400 to 550 psi  
C) 290 to 390 psi      D) 90 to 160 psi

12. Which equipment used for quick inspection under chassis of a car?

- A) Trolley jack      B) Two post hoist  
C) Stand      D) Screw jack

5. What is the purpose of accelerating pump circuit?

- A) Provides mixture for idle speed      B) Provides mixture for low speed  
C) Provides extra fuel during pick up speed      D) Provides an economic mixture

13. Which tool used to tighten the nuts and bolts at recommended tightness?

- A) Pipe wrench      B) Torque wrench  
C) Stud wrench      D) Adjustable wrench

6. What is the formula for Frictional horse power (FHP)?

- A) IHP / BHP      B) IHP - BHP  
C) IHP + BHP      D) BHP / IHP

14. How can identify a four stroke engine?

- A) Ports      B) Cavities  
C) Valves      D) Passages

7. Which instrument used to check the piston ring end gap?

- A) Feeler gauge      B) Vernier gauge  
C) Telescopic gauge      D) Pitch gauge

15. What is the distance covered by the spindle in one full rotation of thimble in outside micrometer?

- A) 1.0 mm      B) 0.5 mm  
C) 1.5 mm      D) 2 mm

8. What is the ampere hour rating if battery deliver 5 ampere and period of 20 hours?

- A) 80 Ampere hour      B) 110 Ampere hour  
C) 90 Ampere hour      D) 100 Ampere hour

16. What is the name of beveled graduated sleeve of outside micro meter?

- A) Barrel      B) Anvil  
C) Thimble      D) Spindle

9. Which type of chisel used to remove excess metal from welded joint?

17. How electrons move in a conductor?

- A) Voltage difference      B) Conductance  
C) Resistance      D) Current

18. What is the working cycle of compression ignition

engine?

- A) Rankin cycle
- B) Otto cycle
- C) Sterling cycle
- D) Diesel cycle

19. Which of the following fuel quality determines burning property of diesel?

- A) Viscosity
- B) Volatility
- C) Cetane number
- D) Octane number

20. How the number of positive and negative plates are compared in a lead acid Battery?

- A) Negative plate is one less than positive plate
- B) Positive plates is one more than negative plates
- C) Positive plate is equal to the negative plate
- D) Negative plate is one more than positive plates

21. How the set of operations performed in sequence of motion of the piston in an engine produce power is called?

- A) Stroke
- B) Stroke
- C) Efficiency
- D) Cycle

22. What is the specification of 6J x 15?

- A) Vehicle size
- B) Tyre size
- C) Wheel rim size
- D) Engine size

23. What is the permissible voltage drop in the electrical circuit?

- A) 0.3 V
- B) 0.2 V
- C) 0.4 V
- D) 0.1 V

24. Which type of brake used in heavy vehicle parking?

- A) Mechanical
- B) Electrical brake
- C) Hydraulic
- D) Pneumatic brake

25. What is the type of inner drive gear used in the internal gear oil pump?

- A) Helical gear
- B) Spur gear
- C) Spiral gear
- D) Rotor gear

26. Which device transmit the pressure equally to all wheel cylinders in hydraulic brake?

- A) Servo cylinder
- B) Booster cylinder
- C) Slave cylinder
- D) Master cylinder

27. Which plier used for bending narrow strips of thin metal sheet?

- A) Flat nose plier
- B) Slip joint plier
- C) Internal circlip plier
- D) Round nose plier

28. How the ports are opened and closed in two stroke

engine?

- A) Movement piston pin
- B) Movement of Rocker arm
- C) Movement of valve
- D) Movement of piston

29. What is the direction of driven gear in an external gear pump?

- A) Inclined direction
- B) Perpendicular direction
- C) Same direction
- D) Opposite direction

30. Which device used to step up the voltage in the spark ignition system?

- A) Spark plug
- B) Condenser
- C) High Tension Cable
- D) Ignition coil

31. Which part of engine can be measured by dial gauge?

- A) Gudgeon pin
- B) Cylinder bore
- C) Crank pin
- D) Piston

32. Which service equipment is used to lift a car?

- A) Hydraulic press
- B) Hydraulic hoist
- C) Arbor press
- D) Hydraulic valve

33. A cycle consisting of one constant pressure, one constant volume and two isentropic processes is known as

- A) Constant volume
- B) Isothermal
- C) Constant pressure
- D) Diesel Cycle

34. Which one is the indirect measuring instrument?

- A) Inside micrometer
- B) Outside micrometer
- C) Steel rule
- D) Inside caliper

35. What is the specific gravity reading range of half charged battery?

- A) 1.260 - 1.280
- B) 1.170 - 1.200
- C) 1.200 - 1.230
- D) 1.230 - 1.260

36. Which hand tool used for circular cut in sheet metal work?

- A) Combination plier
- B) Side cutting plier
- C) Straight snip
- D) Bend snip

37. Which spanner used for zero setting in outside micrometer?

- A) Double end spanner
- B) Hooks spanner
- C) Ring spanner
- D) Adjustable spanner

38. Which act as a seal in the external gear pump?

- A) Housing
- B) Driven gear
- C) Gear meshing
- D) Drive gear

39. Which type of pump used in the hydraulic jack?

- A) Internal gear pump
- B) Gear pump
- C) Vane pump
- D) Plunger pump

40. Which component is used to measure the engine coolant temperature?

- A) Transistor
- B) Thermistor
- C) Diode
- D) Resistor

41. Which instrument is used to check the right angle?

- A) Spring Joint caliper
- B) Steel rule
- C) Try square
- D) Firm joint caliper

42. What is the power flow of pneumatic system?

- A) Actuator - Control valve - Compressor
- B) Control valve - Compressor - Actuator
- C) Compressor - Actuator - Control valve
- D) Compressor - Control valve - Actuator

43. Which device is vaporizing of fuel and mixing it with air in petrol engine?

- A) Fuel filter
- B) Carburetor
- C) AC fuel pump
- D) Tank

44. What is the purpose of needle valve in carburetor?

- A) Decrease the fuel pressure
- B) Always holds correct level of fuel
- C) Excess supply of fuel at idle
- D) Controls the air flow of the engine

45. Which valve regulate the flow rate in hydraulic system?

- A) Delivery
- B) By pass
- C) Non return
- D) Pressure relief

46. Which of the following fuel quality determines burning property of petrol?

- A) Volatility
- B) Octane number
- C) Viscosity
- D) Cetane number

47. How the lead acid Battery is classified?

- A) Dry cell
- B) Alkaline cell
- C) Primary cell
- D) Secondary cell

48. How the AC mechanical pump's fuel delivery pressure is determined?

- A) Maximum deflection of diaphragm
- B) Maximum stroke of diaphragm
- C) Size of the pumping chamber
- D) Spring pressure on diaphragm

49. What is the material of negative plate in the lead acid Battery?

- A) Spongy lead
- B) Tin
- C) Antimony
- D) Lead peroxide

50. What is the effect if the unloader valve is in open position?

- A) Release the air to the brake valve
- B) Allow the air in to the air tank
- C) Maintain the required air pressure
- D) Continuously allow the air to the atmosphere

51. Which measuring gauge needs to be set up to a fixed dimension before use?

- A) Dial test indicator
- B) Depth gauge
- C) Dial bore gauge
- D) Vernier dial gauge

52. What are the two instruments used to measure the warpage of the fly wheel?

- A) Wooden plank, metal shim
- B) Straight edge, feeler gauge
- C) Knife, wooden blank
- D) Steel rule, metal shim

53. How can identify a two stroke engine?

- A) Cavities
- B) Passages
- C) Valves
- D) Ports

54. Which instrument is used to check the run-out of crankshaft journals?

- A) Vernier gauge
- B) Bore dial gauge
- C) Dial test indicator
- D) Telescopic gauge

55. What is the mechanical efficiency of an engine?

- A)  $(FHP/BHP) \times 100$
- B)  $(BHP/FHP) \times 100$
- C)  $(IHP/BHP) \times 100$
- D)  $(BHP/IHP) \times 100$

56. Which cable is the thickest used in the automobile wiring?

- A) Head light cable
- B) Starter motor cable
- C) Horn cable
- D) Wiper motor cable

57. Which is a temperature sensitive resistor?

- A) Diode
- B) Thermistor
- C) Transistor
- D) Thyristor

58. What is the net resistance 'R' if 'R1' and 'R2' resistance are connected in series?

- A)  $R = R1 \times R2$
- B)  $R = R1 + R2$
- C)  $R = R1 + R2$
- D)  $R = R1/R2$

59. What is the angle of throw for 4 cylinder engine?

- A) 180 Degree
- B) 60 Degree
- C) 120 Degree
- D) 90 Degree

60. Which of the following fuel quality determines to evaporate?

- A) Cetane number
- B) Volatility
- C) Octane number
- D) Viscosity

61. What is the purpose of angle plate?

- A) Grinding
- B) Machining
- C) Polishing
- D) Marking

62. Which engine has fuel injection pump?

- A) Diesel engine
- B) CRDI engine
- C) Petrol engine
- D) MPFI engine

63. What is indicated horse power?

- A) Power developed in the cylinder
- B) Power developed in the propeller shaft
- C) Power developed in the flywheel
- D) Power developed in the wheel

64. What is the specific gravity of fully charged battery?

- A) 1.260 - 1.280
- B) 1.210 - 1.230
- C) 1.240 - 1.250
- D) 1.170 - 1.200

65. How the hammers are specified?

- A) Metal and weight
- B) Size and shape
- C) Weight and shape
- D) Metal and shape

66. How many crank shaft rotation required to open exhaust valve one time in four stroke engine?

- A) Three
- B) One
- C) Two
- D) Four

67. Which is the semi conductor materials?

- A) Germanium and silicon
- B) Gallium and indium
- C) Aluminium and antimony
- D) Arsenic and boron

68. What does number 25 in the cable size (25/0.012) indicate?

- A) Thickness of the cable
- B) Length of the strand
- C) Diameter of the strand
- D) Number of the strand

69. What is the purpose of throttle valve in the carburetor?

- A) Controls air fuel mixture into the engine
- B) Excess supply of fuel at idle
- C) Always holds correct fuel
- D) Filter the fuel

70. Which causes the air enter into cylinder?

- A) Carburettor air-horn pressure
- B) Engine vacuum
- C) Air filtering
- D) AC fuel pump pressure

71. Which metal tube is used for single thickness flare?

- A) Copper
- B) Brass
- C) Aluminium
- D) Bronze

72. Which device converts mechanical energy into pneumatic energy?

- A) Generator
- B) Actuator
- C) Compressor
- D) Alternator

73. What is the purpose of half round chisel?

- A) Squaring metal at corners
- B) Cut curved grooves
- C) Cut keyways
- D) Cut excess metal

74. What is the energy conversion of battery during charging?

- A) Electrical energy into chemical energy
- B) Electrical energy into mechanical energy
- C) Chemical energy into electrical energy
- D) Electrical energy into heat energy

75. What is the working media in pneumatic system?

- A) Steam
- B) Air
- C) Diesel
- D) Oil

76. Which law states that the pressure intensity of a static liquid equal in all direction?

- A) Newton's law
- B) Pascal's law
- C) Boyle's law
- D) Charle's law

77. What is the purpose of the cross pein in the hammer?

- A) Spread the metal in one direction
- B) Strike the metal in all direction
- C) Strike the metal
- D) Fix the handle

78. What is the material of positive plate in the lead acid Battery?

- A) Antimony
- B) Lead peroxide
- C) Spongy lead
- D) Tin

79. What is heat?

- A) Torque
- B) Energy
- C) Force
- D) Velocity

80. How is the Battery capacity expressed?

- A) Voltage rating
- B) Ampere - hour rating

C) Ampere rating

D) Voltage - hour rating

A) Cycle

B) Power

C) Stroke length

D) Torque

81. How many crank shaft rotations required to get one power in four stroke single cylinder diesel engine?

A) Three

B) Four

C) Two

D) One

82. Which is the Ohm's Mathematical Expression?

A)  $I=(V/R)$

B)  $V=(I/R)$

C)  $R=(I/V)$

D)  $I=(R/V)$

83. What is the compression ratio of an engine, its clearance volume is 10 c.c and swept volume is 90 c.c?

A) 11:01

B) 09:01

C) 08:01

D) 10:01

84. Which instrument is used to measure the electrical resistance?

A) Ammeter

B) Voltmeter

C) Ohmmeter

D) Wattmeter

85. What is the purpose of valve in AC fuel pump?

A) Supply correct quantity of fuel

B) Creating suction

C) Creating pressure

D) Allow the fuel to suck and deliver

86. Which valve save the pneumatic brake components against damage?

A) Unloader valve

B) Brake valve

C) Check valve

D) Relay valve

87. What is the energy conversion of battery during discharge?

A) Electrical energy into mechanical energy

B) Electrical energy into chemical energy

C) Chemical energy into electrical energy

D) Electrical energy into heat energy

88. What is the working principle of dial test indicator?

A) Leverage motion

B) Linear motion into reciprocating motion

C) Spring motion

D) Linear motion into rotary motion

89. How many times, ports are open in two rotation of crank shaft in two stroke engine?

A) Two times

B) Three times

C) One time

D) Four times

90. How the amount of work done in a specification is called?

91. Which is the engine having cylinders in 180 Degree?

A) Inline engine

B) Opposed engine

C) Radial engine

D) V- engine

92. Where the emulsion tube is provided in solex carburetor?

A) Cold starter

B) Choke

C) Main jet

D) Idle jet

93. How many switching position in 4/2 directional control valve?

A) Two

B) Four

C) One

D) Three

94. Which valve is to be closed before lifting the load with hydraulic jack?

A) Non return valve-2

B) Non return valve-1

C) Shut of valve

D) Relief valve

95. Which precision instrument used for taking external, internal and depth measurement?

A) Vernier caliper

B) Depth micrometer

C) Inside micrometer

D) Outside micrometer

96. Which component of air brake system converts pneumatic into mechanical energy?

A) Brake chamber

B) Reservoir

C) Brake valve

D) Compressor

97. Which unit supplies a fine mist of oil in pneumatic system?

A) Actuator

B) Control valve

C) Air service unit

D) Pressure relief valve

98. Which ministry of India regulate the motor vehicle activity?

A) Minister of finance

B) Minister of defence

C) Minister of rural and development

D) Minister of road transport and highways

99. Which instrument is used to check the continuity of the field coils of DC motor?

A) Voltmeter

B) Ohmmeter

C) Ammeter

D) Wattmeter

100. When did first car rolled in the street of Calcutta?

A) 1910

B) 1950

C) 1887

D) 1810

101. A cycle consisting of one constant pressure, one constant volume and two isentropic processes is known as

- A) Constant pressure
- B) Diesel Cycle
- C) Isothermal
- D) Constant volume

102. What is the colour of positive plates in the charged lead - acid - battery?

- A) Black
- B) Grey
- C) Brown
- D) White

103. When the valve clearance to be adjusted?

- A) Fully opened
- B) Just opened
- C) Fully closed
- D) Partially closed

104. What is the smallest reading of vernier caliper?

- A) Tolerance
- B) Least count
- C) Deviation
- D) Allowance

105. Which material is required to make integrated circuit chips?

- A) silicon
- B) steel
- C) copper
- D) zinc

106. What type of emf is produced if the conductor moved and cut the magnetic field?

- A) Electro-chemical induced emf
- B) Electro-magnetic induced emf
- C) Statistically induced emf
- D) Dynamically induced emf

107. Which is used for marking and setting of work?

- A) Bench vice
- B) V- Block
- C) Marking table
- D) Surface plate

108. What is the volume of the space above the piston at TDC?

- A) Displace volume
- B) Total volume
- C) Clearance volume
- D) Swept volume

109. What is flaring?

- A) Decreasing the diameter of a tube
- B) Increasing the length of a tube
- C) Increasing the diameter of a tube end
- D) Decreasing the length of a tube

110. How the semi conductor material can be identified with atomic structure?

- A) Five electrons in the outer most orbit
- B) Two electrons in the outer most orbit
- C) Three electrons in the outer most orbit
- D) Four electrons in the outer most orbit

111. Which electronic component is used as a solid state switch?

- A) Capacitor
- B) Inductor
- C) Resistor
- D) Transistor

112. Which of the following fuel quality determines fuel to flow?

- A) Cetane number
- B) Octane number
- C) Viscosity
- D) Volatility

113. Where is the air fuel mixture compressed in the two stroke petrol engine?

- A) Intake port
- B) Exhaust port
- C) Combustion chamber
- D) Transfer port

114. Which part operates the brake shoe in the hydraulic brake system?

- A) Break drum
- B) Wheel cylinder
- C) Break pedal
- D) Master cylinder

115. Which engine has carburetor?

- A) Petrol
- B) Mineral oil
- C) Diesel
- D) Kerosene

116. Which device converts hydraulic energy into mechanical energy?

- A) Regulator
- B) Control Valve
- C) Compressor
- D) Actuator

117. Which association of india is playing crucial role in less pollution?

- A) ARAI (Automotive research association of India)
- B) AAI (Automobile Association of India)
- C) AASI (Automobile Association of South India)
- D) AIA (Automotive industry Association)

118. Which measure the liquid's resistance of flow?

- A) Elasticity
- B) Viscosity
- C) Quality
- D) Gravity

119. Which acid is used in the lead acid Battery?

- A) Hydro chloric acid
- B) Nitric acid
- C) Sulphuric acid
- D) Hydro bromic acid

120. What is the stroke length of the engine if its throw of the crankshaft is 40 mm?

- A) 60 mm
- B) 80 mm
- C) 20 mm
- D) 40 mm

121. Which refers the size of hexagonal Allen key?

- A) Size of the radius
- B) Size of the diameter
- C) Size across the flat
- D) Size of the diagonal

122. How many cells are in the 12V Battery?

- A) 9 cells
- B) 6 cells
- C) 2 cells
- D) 12 cells

123. Why suction tube in the tank is raised above?

- A) To avoid suction of water in fuel
- B) To enter air
- C) To act atmospheric pressure
- D) To enter condensed water

124. What is the function of hydraulic oil in hydraulic system?

- A) Increase the heat
- B) Increase the volume
- C) Transmit power
- D) Reduce the pressure

125. What is the reason for pneumatic brake failure?

- A) Less pedal play
- B) Defective unloader valve
- C) Defective front wheel slack adjuster
- D) More pedal play

126. What is the use of ratchet stop in out side micro meter?

- A) Prevent load
- B) Prevent speed
- C) Prevent excessive pressure
- D) Prevent sliding

127. Which instrument is prohibited to connect with live wire?

- A) Ohmmeter
- B) Ammeter
- C) Wattmeter
- D) Voltmeter

128. Which measuring instrument used to measure the Ampere, volt and resistance?

- A) Energy meter
- B) Galvana meter
- C) Wattmeter
- D) Multi meter

129. How the screw driver is specified?

- A) Length of blade and width of tip
- B) Width and diameter of the edge
- C) Thickness and length
- D) Shape and length

130. Which law state that 'The current is directly proportional to the voltage and inversely proportional to the resistance'?

- A) Hook's Law
- B) Newton's Law
- C) Ohm's Law
- D) Boyle's Law

131. Which engine has more length?

- A) 'V' engine
- B) Opposed engine

C) Radial engine

D) Inline engine

132. Which type of socket spanner can be turned to an angle?

- A) Swivel socket spanner
- B) Deep socket spanner
- C) Spark plug socket spanner
- D) Socket spanner

133. Which is the power developed in an engine?

- A) BHP
- B) IHP
- C) IHP
- D) RHP

134. Which service unit act as filter, regulator and lubricator in the pneumatic system?

- A) Compressor unit
- B) Actuator unit
- C) Air service unit
- D) Valve unit

135. What is the purpose of colour code in cables?

- A) Colour refers the voltage rating
- B) Colour refers the current rating
- C) Easy identification of each circuit
- D) Refers the size of the wire

136. Which gauge is used to check the inflation of tyre?

- A) Feeler gauge
- B) Wire gauge
- C) Pressure gauge
- D) Vacuum gauge

137. How many national automotive testing and R&D infrastructure projects (NATRIP) are established in India?

- A) 5
- B) 4
- C) 6
- D) 7

138. What is the use of Ohmmeter in an electrical circuit?

- A) Measure the current
- B) Measure the power
- C) Measure the voltage
- D) Measure the resistance

139. Which part in the internal gear pump act as seal?

- A) Gasket
- B) Sealing ring
- C) Gears
- D) Crescent-shaped spacer

140. What is the use of ball pein hammer head?

- A) Spread the metal In all direction
- B) Strike soft metal
- C) Strike the metal
- D) Stamp the specifications

141. What is the advantage of free maintenance sealed battery?

- A) No chance for sulphation of battery terminals
- B) No need for disconnect the terminals to remove battery

C) No need for recharging of battery  
D) No need for check and top up distilled water.

142. Which device have the ability to store electrical charge?

- A) Conductor  
B) Capacitor  
C) Insulator  
D) Resistor

143. What is the reason for fuse blown out in an electrical circuit?

- A) Short circuit  
B) Parallel circuit  
C) Series circuit  
D) Open circuit

144. Which law is applied in hydraulic brake system?

- A) Newton's law  
B) Pascal's law  
C) Boyle's law  
D) Charles law

145. Which digit indicate the engine type in 17 digit of vin number?

- A) 5 digit  
B) 8 digit  
C) 3 digit  
D) 2 digit

146. Which gauge used to check the spark plug gap?

- A) Feeler gauge  
B) Pitch gauge  
C) Vernier gauge  
D) Telescopic gauge

147. Which gauge used to check leakage of inlet manifold?

- A) Feeler gauge  
B) Pressure gauge  
C) Emission gauge  
D) Vacuum gauge

148. Which valve safe guards the hydraulics jack?

- A) Shut off valve  
B) Non return valve 1  
C) Relief valve  
D) Non return valve 2

149. What type of resistor is used in the vehicle flasher unit?

- A) Film resistor  
B) Printed resistor  
C) Integrated resistor  
D) Ballast resistor

150. Which type of the circuit leads to hazard effect?

- A) Short circuit  
B) Open circuit  
C) Parallel circuit  
D) Series circuit

151. How many flywheel rotation requires to complete one cycle in two stroke engine?

- A) One  
B) Three  
C) Two  
D) Four

152. Which shell electrons has least energy?

- A) M shell electron  
B) N shell electron  
C) L shell electron  
D) K shell electron

153. Which screw driver is used in blind space?

- A) Stumpy screw driver  
B) Ratchet screw driver  
C) Offset screw driver  
D) Philips screw driver

154. Which is the engine called as constant volume cycle?

- A) C.I engine  
B) Turbine engine  
C) Steam engine  
D) S.I engine

155. Which is the power source of pneumatic system?

- A) Air Compressor  
B) Control valve  
C) Air Service unit  
D) Actuator

156. Which year Hindustan motor established ambassador car industry in India?

- A) 1980  
B) 1900  
C) 1900  
D) 1940