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Trinity iti Udupi

Q. ID: ITISKILL2267CY
Question Paper

Student: Akshay
Score: 127/156 (81.41%)

Code: 4303

1. How electrons move in a conductor?

A) Current (Incorrect) | B) Resistance
C) Conductance | **D) Voltage difference**

2. Which is the Ohm's Mathemetical Expression?

A) I=(V/R) (Correct) | B) I=(R/V)
C) V=(I/R) | D) R=(I/V)

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

A) Ballast resistor (Correct) | B) Film resistor
C) Printed resistor | D) Integrated resistor

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

A) zinc | B) steel
C) silicon | D) copper (Incorrect)

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

A) Inductor | B) Resistor
C) Capacitor | **D) Transistor (Correct)**

6. Which is a temperature sensitive resistor?

A) Diode | B) Thyristor
C) Thermistor (Correct) | D) Transistor

7. Which component is used to measure the engine coolent temperature?

A) Thermistor (Correct) | B) Resistor
C) Transistor | D) Diode

8. What is the permissable voltage drop in the electrical circuit?

A) 0.1 V | **B) 0.2 V**
C) 0.3 V (Incorrect) | D) 0.4 V

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

A) 2 cells (Incorrect) | **B) 6 cells**
C) 9 cells | D) 12 cells

10. What is the material of possitive plate in the lead acid Battery?

A) Tin | **B) Lead peroxide**
C) Antimony (Incorrect) | D) Spongy lead

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

A) Spongy lead (Correct) | B) Tin
C) Antimony | D) Lead peroxide

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

A) Grey | **B) Brown (Correct)**
C) White | D) Black

13. How the lead acid Battery is classified?

A) Dry cell | **B) Secondary cell (Correct)**
C) Alkaline cell | D) Primary cell

14. How is the Battery capacity expressed?

A) Ampere - hour rating (Correct) | B) Voltage - hour rating
C) Ampere rating | D) Voltage rating

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

A) Ammeter | B) Voltmeter
C) Ohmmeter (Correct) | D) Wattmeter

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

A) Ammeter (Incorrect) | B) Voltmeter
C) Ohmmeter | D) Wattmeter

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

A) Ohm's Law (Correct) | B) Hook's Law
C) Boyle's Law | D) Newton's Law

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

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

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

A) Capacitor (Correct) B) Resistor
C) Insulator D) Conductor

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

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

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

A) Electrical energy into heat energy **B) Chemical energy into electrical energy (Correct)**
C) Electrical energy into chemical energy D) Electrical energy into mechanical energy

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

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

23. Which shell electrons has least energy?

A) K shell electron B) L shell electron (Incorrect)
C) M shell electron D) N shell electron

24. Which is the semi conductor materials?

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

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

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

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

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

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

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

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

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

29. What type of emf is proceduced if the conductor moved and cut the magnetic fied?

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

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

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

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

A) Measure the resistance (Correct) B) Measure the current
C) Measure the voltage D) Measure the power

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

A) Wattmeter B) Energy meter
C) Galvana meter **D) Multi meter (Correct)**

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

A) Length of the strand **B) Number of the strand (Correct)**
C) Diameter of the strand D) Thickness of the cable

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

A) 80 Ampere hour B) 90 Ampere hour
C) 100 Ampere hour (Correct) D) 110 Ampere hour

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

A) Nitric acid **B) Sulphuric acid (Correct)**
C) Hydro bromic acid D) Hydro chloric acid

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

A) No need for check and top up distilled water. (Correct) B) No need for recharging of battery
C) No chance for sulphation of battery terminals D) No need for disconnect the terminals to remove battery

37. Which instrument is used to check the continuity of the

field coils of DC motor?

A) Ammeter | B) Voltmeter (Incorrect)
C) Ohmmeter | D) Wattmeter

38. Which type of the circuit has an infinite resistance?

A) Open circuit (Correct) | B) Short circuit
C) Series closed circuit | D) Parallel closed circuit

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

A) Open circuit | B) Series circuit
C) Short circuit (Correct) | D) Parallel circuit

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

A) R = R1 + R2 (Correct) | B) R = R1 ? R2
C) R = R1 x R2 | D) R = R1/R2

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

A) Open circuit | **B) Short circuit (Correct)**
C) Series circuit | D) Parallel circuit

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

A) 1810 | **B) 1887 (Correct)**
C) 1910 | D) 1950

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

A) 1900 | B) 1900
C) 1940 (Incorrect) | **D) 1980**

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

A) Hydraulic | **B) Mechanical (Correct)**
C) Electrical brake | D) Pneumatic brake

45. 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 (Correct)**

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

A) Arbor press | B) Hydraulic valve
C) Hydraulic hoist (Correct) | D) Hydraulic press

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

A) Stand | B) Screw jack
C) Trolley jack | D) Two post hoist (Incorrect)

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

A) Choke | B) Idle jet
C) Main jet (Correct) | D) Cold starter

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

A) Tyre size | B) Engine size
C) Vehicle size | **D) Wheel rim size (Correct)**

50. Which digit indicate the engine type in 17 digit of win number?

A) 2 digit | B) 3 digit
C) 5 digit | **D) 8 digit (Correct)**

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

A) Torque | **B) Power (Correct)**
C) Stroke length | D) Cycle

52. Which engine has more length?

A) Opposed engine | B) 'V' engine (Incorrect)
C) Inline engine | D) Radial engine

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

A) Inline engine | B) V- engine (Incorrect)
C) Opposed engine | D) Radial engine

54. How can identify a four stroke engine?

A) Valves (Correct) | B) Ports
C) Cavities | D) Passages

55. What is the working cycle of compression ignition engine?

A) Diesel cycle (Correct) | B) Otto cycle
C) Sterling cycle | D) Rankin cycle

56. How the ports are opened and closed in two stroke engine?

A) Movement of valve | B) Movement of Rocker arm
C) Movement of piston (Correct) | D) Movement piston pin

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

A) One | **B) Two (Correct)**
C) Three | D) Four

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

A) Swept volume
B) Clearance volume (Correct)
C) Total volume
D) Displace volume

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

A) One time
B) Two times
C) Three times
D) Four times (Incorrect)

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

A) Intake port
B) Exhaust port
C) Transfer port
D) Combustion chamber (Correct)

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

A) One
B) Two (Correct)
C) Three
D) Four

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

A) 60 Degree
B) 90 Degree
C) 120 Degree
D) 180 Degree (Correct)

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

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

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

A) Cycle (Correct)
B) Stroke
C) Stroke
D) Efficiency

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

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

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

A) S.I engine (Correct)
B) C.I engine
C) Turbine engine
D) Steam engine

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

A) Constant volume
B) Constant pressure
C) Diesel Cycle (Correct)
D) Isothermal

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A) Valves
B) Ports (Correct)
C) Cavities
D) Passages

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

A) 08:01
B) 09:01
C) 10:01 (Correct)
D) 11:01

71. Which is the power developed in an engine?

A) BHP
B) IHP (Correct)
C) IHP
D) RHP

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

A) 20 mm
B) 40 mm
C) 60 mm
D) 80 mm (Correct)

73. When the valve clearance to be adjusted?

A) Fully closed (Incorrect)
B) Partially closed
C) Fully opened
D) Just opened

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

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

75. Which engine has fuel injection pump?

A) Petrol engine
B) Diesel engine (Correct)
C) CRDI engine
D) MPFI engine

76. Which engine has carburetor?

A) Petrol (Correct)
B) Diesel
C) Kerosene
D) Mineral oil

77. What is the mechanical efficiency of an engine?

A) (BHP/IHP)x100 (Correct)
B) (BHP/FHP)x100
C) (IHP/BHP)x100
D) (FHP/BHP)x100

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

A) Combustion
B) Super charging
C) Scavenging (Correct)
D) Intaking

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

A) To enter air (Incorrect)
B) To avoid suction of water in fuel

C) To enter condensed water | D) To act atmospheric pressure

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

A) Creating suction | B) Creating pressure (Incorrect)
C) Supply correct quantity of fuel | **D) Allow the fuel to suck and deliver**

81. Which causes the air enter into cylinder?

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

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

A) Spring pressure on diaphragm (Incorrect) | **B) Maximum stroke of diaphragm**
C) Size of the pumping chamber | D) Maximum deflection of diaphragm

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

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

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

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

85. What is the purpose of accelerating pump circuit?

A) Provides an economic mixture | B) Provides mixture for low speed
C) Provides mixture for idle speed | **D) Provides extra fuel during pick up speed (Correct)**

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

A) Tank | B) Fuel filter
C) Carburetor (Correct) | D) AC fuel pump

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

A) Volatility | B) Viscosity
C) Cetane number | **D) Octane number (Correct)**

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

A) Volatility | B) Viscosity
C) Cetane number (Correct) | D) Octane number

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

A) Volatility (Correct) | B) Viscosity
C) Cetane number | D) Octane number

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

A) Volatility | **B) Viscosity (Correct)**
C) Cetane number | D) Octane number

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

A) AAI (Automobile Association of India) | B) AIA (Automotive industry Association)
C) AASI (Automobile Association if South India) | **D) ARAI (Automotive research association of India) (Correct)**

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

A) 4 | B) 5
C) 6 | **D) 7 (Correct)**

93. How many flywheel rotation requries to compelet one cycle in two stroke engine?

A) One (Correct) | B) Two
C) Three | D) Four

94. What is heat?

A) Torque | B) Force
C) Energy (Correct) | D) Velocity

95. What is indicated horse power?

A) Power developed in the cylinder (Correct) | B) Power developed in the flywheel
C) Power developed in the propeller shaft | D) Power developed in the wheel

96. What is brake horse power?

A) Power available at fly wheel (Correct) | B) Power available at the cylinder
C) Power available at the wheels | D) Power available at the gear box

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

A) IHP - BHP (Correct) | B) IHP + BHP
C) IHP / BHP | D) BHP / IHP

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

A) Straight snip **B) Bend snip (Correct)**
C) Combination plier D) Side cutting plier

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

A) Hooks spanner (Correct) B) Ring spanner
C) Double end spanner D) Adjustable spanner

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

A) Wire gauge B) Feeler gauge
C) Vacuum gauge **D) Pressure gauge (Correct)**

101. What is the smallest reading of vernier caliper?

A) Deviation B) Tolerance
C) Least count (Correct) D) Allowance

102. Which one is the indirect measuring instrument?

A) Steel rule **B) Inside caliper (Correct)**
C) Inside micrometer D) Outside micrometer

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

A) Anvil B) Barrel (Incorrect)
C) Spindle **D) Thimble**

104. What is flaring?

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

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

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

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

A) Socket spanner B) Deep socket spanner
C) Spark plug socket spanner **D) Swivel socket spanner (Correct)**

107. Which tool used to tighten the nuts and blots at recommended tightness?

A) Stud wrench B) Pipe wrench
C) Torque wrench (Correct) D) Adjustable wrench

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

A) Strike soft metal B) Strike the metal
C) Stamp the specifications **D) Spread the metal In all direction (Correct)**

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

A) Brass (Incorrect) B) Bronze
C) Aluminium **D) Copper**

110. How the hammers are specified?

A) Weight and shape (Correct) B) Size and shape
C) Metal and shape D) Metal and weight

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

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

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

A) Steel rule **B) Try square (Correct)**
C) Firm joint caliper D) Spring Joint caliper

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

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

114. What is the purpose of angle plate?

A) Machining **B) Marking (Correct)**
C) Polishing D) Grinding

115. What is the purpose of half round chisel?

A) Cut excess metal **B) Cut curved grooves (Correct)**
C) Squaring metal at corners D) Cut keyways

116. Which screw driver is used in blind space?

A) Ratchet screw driver (Incorrect) **B) Offset screw driver**
C) Philips screw driver D) Stumpy screw driver

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

A) Fix the handle B) Strike the metal
C) Strike the metal in all direction **D) Spread the metal in one direction (Correct)**

118. Which refers the size of hexagonal Allen key?

A) Size of the radius B) Size of the diagonal
C) Size of the diameter **D) Size across the flat (Correct)**

119. How the screw driver is specified?

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

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

A) Crank pin	B) Gudgen pin
C) Piston	**D) Cylinder bore (Correct)**

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

A) Leverage motion (Incorrect)	B) Spring motion
C) Linear motion into reciprocating motion	**D) Linear motion into rotary motion**

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

A) Telescopic gauge	**B) Dial test indicator (Correct)**
C) Bore dial gauge	D) Vernier gauge

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

A) Telescopic gauge	B) Vernier gauge
C) Pitch gauge	**D) Feeler gauge (Correct)**

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

A) Feeler gauge (Correct)	B) Vernier gauge
C) Pitch gauge	D) Telescopic gauge

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

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

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

A) Vernier caliper (Correct)	B) Depth micrometer
C) Inside micrometer	D) Outside micrometer

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

A) Prevent load	B) Prevent speed
C) Prevent excessive pressure (Correct)	D) Prevent sliding

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

A) 2 mm	B) 1.5 mm
C) 1.0 mm	**D) 0.5 mm (Correct)**

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

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

130. Which gauge used to check leakage of inlet mainfied?

A) Feeler gauge	**B) Vacuum gauge (Correct)**
C) Pressure gauge	D) Emission gauge

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

A) Gravity	B) Elasticity
C) Quality	**D) Viscosity (Correct)**

132. Which law is applied in hydraulic brake system?

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

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

A) Boyle's law	**B) Pascal's law (Correct)**
C) Charle's law	D) Newton's law

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

A) Four	**B) Two (Correct)**
C) One	D) Three

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

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

136. What is the power flow of pneumatic system?

A) Compressor - Actuator - Control valve	B) Control valve - Compressor - Actuator
C) Actuator - Control valve - Compressor	**D) Compressor - Control valve - Actuator (Correct)**

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

A) Gear pump	**B) Plunger pump (Correct)**
C) Vane pump	D) Internal gear pump

138. Which device converts mechanical energy into pneumatic energy?

A) Actuator	B) Generator
C) Alternator	**D) Compressor (Correct)**

139. Which device converts hydraulic energy into mechanical

energy?

A) Actuator (Correct) B) Regulator
C) Compressor D) Control Valve

140. Which valve safe guards the hydraulics jack?

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

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

A) Slave cylinder B) Servo cylinder
C) Master cylinder (Correct) D) Booster cylinder

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

A) Reservoir B) Brake valve
C) Compressor **D) Brake chamber (Correct)**

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

A) Air service unit (Correct) B) Compressor unit
C) Valve unit D) Actuator unit

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

A) Break drum B) Break pedal
C) Wheel cylinder (Correct) D) Master cylinder

145. Which is the power source of pneumatic system?

A) Actuator B) Control value
C) Air Compressor (Correct) D) Air Service unit

146. What is the working media in pneumatic system?

A) Air (Correct) B) Oil
C) Diesel D) Stream

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

A) Housing B) Drive gear
C) Driven gear **D) Gear meshing (Correct)**

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

A) By pass (Incorrect) **B) Delivery**
C) Non return D) Pressure relief

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

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

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

A) Same direction B) Inclined direction
C) Opposite direction (Correct) D) Perpendicular direction

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

A) Actuator B) Control valve
C) Air service unit (Correct) D) Pressure relief valve

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

A) Spur gear B) Spiral gear
C) Rotor gear (Incorrect) D) Helical gear

153. What is the reason for pneumatic brake failure?

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

154. 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 (Incorrect)
C) Maintain the required air pressure **D) Continuously allow the air to the atmosphere**

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

A) Relief valve **B) Shut of valve (Correct)**
C) Non return valve-1 D) Non return valve-2

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

A) Brake valve B) Check valve
C) Relay valve **D) Unloader valve (Correct)**