

Duration: 30 Mins

Total Marks: 166

ID: ITISKILL5722PV

Student Name: _____ Roll No: _____

1. What is the formula for velocity?
 A) Change in velocity/Time B) Displacement/Time
 C) Distance covered/Time D) Change of momentum/Time

2. Which law states about electromagnetic induction?
 A) Lenz's law B) Ohm's law
 C) Faraday's law D) Hooke's law

3. What maximum height a stone will reach if it is thrown upwards with a velocity of 20m/sec?(g = 10m/sec²)
 A) 20 m B) 10 m
 C) 40 m D) 30 m

4. Which alloy used in electric lamp as filament?
 A) Tungsten B) Vanadium
 C) Cobalt D) Silicon

5. What is the square root of decimal number 550.37?
 A) 23.46 B) 22.26
 C) 22.46 D) 21.26

6. Simplify: (3/4)+(2/5)-(5/20)
 A) (13/10) B) (9/10)
 C) (3/10) D) (12/10)

7. What is the square root of 529?
 A) 43 B) 12
 C) 33 D) 23

8. What is the formula for speed?
 A) Change in momentum/Time B) Distance covered/Time
 C) Distance in definite direction /Time D) Change in velocity/Time

9. What is the area of a sector of a circle of radius 5 cm and its angle is 96 Degree?
 A) 20.98 cm² B) 20.93 cm²
 C) 20.39 cm² D) 20.89 cm²

10. What is the potential energy in a body of mass 10 kg kept on the top of a pole 20 metres height?
 A) 1952 Joules B) 1972 Joules
 C) 1962 Joules D) 1942 Joules

11. Which is same in series connection of resistors in a circuit?
 A) Power B) Voltage
 C) Current D) Resistance

12. What is the current?
 R = 50 Ohms 220 Volts
 I = _____Amps
 A) 4.1 Amps B) 4.4 Amps
 C) 4.3 Amps D) 4.2 Amps

13. What is the name of the property of an insulation that should brake down or puncture on application of high voltage?
 A) Specific resistance B) Di-electric strength
 C) Non absorption D) Mechanical strenth

14. How many ergs for 1 Joule?
 A) 10⁹ ergs B) 10⁵ ergs
 C) 10³ ergs D) 10⁷ ergs

15. What is called if a body posses only magnitude or size alone?
 A) Speed B) Velocity
 C) Vector quantity D) Scalar quantity

16. Which steel is used for making files and cold chisel?
 A) High carbon steel B) Low carbon steel
 C) Midium carbon steel D) Stainless steel

17. Which alloy steel is used to make permanent magnets?
 A) Manganese steel B) Vanadium steel

C) Cobalt steel

D) Silicon steel

A) 98 mm

B) 68 mm

C) 88 mm

D) 78 mm

18. What is volume of the cylinder whose radius is 7 cm and height 12 cm?

A) 1847 c.c

B) 1844 c.c

C) 1846 c.c

D) 1842 c.c

19. What is the specific gravity of the metal, if the weighs 6.5 kgf in air and 3.5 kgf in water?

A) 1.166

B) 2.166

C) 3.166

D) 6.166

20. How much voltage will be required to illuminate a 40 watts fluorescent lamp draws a current of 0.10 amperes?

A) 395 volts

B) 405 volts

C) 390 volts

D) 400 volts

21. A motor cycle tyre is sold for Rs 300/- what is the purchase price if 25% profit is added to it.

A) Rs 200

B) Rs 240

C) Rs 220

D) Rs 260

22. Which property of a metal enables it by which it can be drawn out into wires under tension without rupture?

A) Hardness

B) Brittleness

C) Malleability

D) Ductility

23. What is the acceleration of a car if the speed of the car has increased from 25 km per hour to 40 km per hour in one minute?

A) 0.069

B) 0.059

m/sec²

m/sec²

C) 0.69 m/sec² D) 0.59 m/sec²

24. Simplify: $(17.49 \times 5.2) / (6.5)$

A) 13.69

B) 13.99

C) 13.89

D) 13.79

25. What is the diagonal of a square plate whose side is 28 cm?

A) 39.49 cm

B) 39.39 cm

C) 39.29 cm

D) 39.59 cm

26. Which machine converts mechanical energy into electrical energy?

A) Generator

B) Heater

C) Battery

D) Iron box

27. What is the perimeter of scalene. Triangle having sides of 40mm, 20mm and 28mm?

28. What is the volume of a rectangular tank of 30 m length, 20m width and 10m height?

A) 6000 m³

B) 6100 m³

C) 5900 m³

D) 6200 m³

29. What is the carbon percentage in high carbon steel?

A) 0.25% to 0.50%

B) 0.50% to 1.50%

C) 0.02% to 0.03%

D) 0.15% to 0.25%

30. What is the capacity of a conical tank of radius 2 m and height 5m?

A) 21 m³

B) 11 m³

C) 41 m³

D) 31 m³

31. Which metal contains iron as a major content?

A) Bronze metal

B) Zinc

C) Brass metal

D) Ferrous metal

32. What is the weight force of a car has a mass of 800 kg?(Take g = 9.81m/sec)

A) 7748 Newton

B) 7487 Newton

C) 7848 Newton

D) 7847 Newton

33. What is called if a body posses both magnitude and direction of velocity?

A) Velocity

B) Speed

C) Vector quantity

D) Scalar quantity

34. What is the voltage of the immersion heater? $P = 500$ watts $I = 2.27$ Amps $V = \underline{\hspace{2cm}}$ Volts

A) 230.3 volts

B) 200.3 volts

C) 220.3 volts

D) 210.3 volts

35. Which is very good conductor?

A) Wrought iron

B) Copper

C) Cast iron

D) Steel

36. What is the product of 0.003×0.5 ?

A) 0.00015

B) 0.15

C) 0.015

D) 0.0015

37. What is the HCF of 18, 42, 24?

A) 2

B) 6

C) 24

D) 18

38. What metals contained in brass alloy?

- A) Copper and lead
C) Copper and zinc
- B) Copper and tin
D) Copper and aluminium

39. Which metal is widely used for making casting of machinery parts?

- A) Grey cast iron
C) White cast iron
- B) Wrought iron
D) Malleable cast iron

40. What is the formula for total surface area of a cylinder?

- A) $2\pi rh$
C) πrh
- B) $2\pi r(h+r)$
D) $\pi r(h+r)$

41. What is the force with which a body is attracted by the earth towards its centre?

- A) Density
C) Mass
- B) Volume
D) Weight

42. What is the carbon percentage in low carbon steel?

- A) 0.25% to 0.50%
C) 0.50% to 1.50%
- B) 0.02% to 0.03%
D) 0.15% to 0.25%

43. What is the area of a square whose side is 18 cm?

- A) 324 cm^2
C) 72 cm^2
- B) 36 cm^2
D) 26 cm^2

44. What is the voltage? $R = 250\text{ Ohms}$ $I = 0.44\text{ Amps}$ $V = \text{___Volts}$

- A) 110 Volts
C) 105 Volts
- B) 108 Volts
D) 100 Volts

45. What is the current Flow in the bulb? $P = 550\text{ watts}$ $R = 22\text{ Ohms}$ $I = \text{___Amps}$

- A) 4 Amps
C) 3 Amps
- B) 2 Amps
D) 5 Amps

46. How much power does it consumes if an electric heater draws a current of 10 amps at 200 volts?

- A) 2020 watts
C) 2030 watts
- B) 2000 watts
D) 2010 watts

47. Which mechanical property of a metal offers resistance to elastic deformation in a cutting tool?

- A) Toughness
C) Hardness
- B) Malleability
D) Ductility

48. What is the x value for $x^2 + 62 = 126$?

- A) 6
C) 4
- B) 8
D) 10

49. What is the unit of acceleration of an object?

- A) Metre/minutes
C) Metre/second²
- B) Metre/minutes²
D) Metre/second

50. What is the ratio of 4 kg to 800 grams?

- A) 05:01
C) 02:04
- B) 08:04
D) 04:08

51. Which one is non-metal?

- A) Brass
C) Graphite
- B) Mercury
D) Iron

52. What is the name of the metal which do not contain iron?

- A) Ferrous metals
C) Non-Insulating metals
- B) Non-ferrous metals
D) Insulating metals

53. What are fundamental units?

- A) Length, Pressure, Volume
C) Length, Mass, Volume
- B) Length, Mass, Time
D) Length, Mass, Area

54. What is the area of a right angled triangle having a base 10 cm and height 5 cm?

- A) 35 sq.cm
C) 20 sq.cm
- B) 30 sq.cm
D) 25 sq.cm

55. Which insulator is used in over head lines?

- A) Rubber
C) Mica
- B) P.V.C
D) Porcelain

56. What is the length L₂, if total length (L) is 2.75 metre and L₁:L₂ = 2:3?

- A) 1.65 metre
C) 1.1 metre
- B) 1.25 metre
D) 1.75 metre

57. Convert 52% into fraction?

- A) (13/25)
C) (9/25)
- B) (17/25)
D) (11/25)

58. Find the total surface area of a cast iron bar whose length, width and height are 20m, 15m and 12m.

- A) 1540 m^2
C) 1340 m^2
- B) 1440 m^2
D) 1640 m^2

59. What is called if a force of 1Newton acts on a body and moves it through a distance of 1 metre?

- A) 1 Joule
C) 10 dynes
- B) 10 Joules
D) 1 dyne

60. Which rubber is used as insulator for power cables and control wires?

- A) Nitrite butadiene B) Silicon
C) Butyl D) Hypalone

61. What is the volume of sphere of radius 7 cm?

- A) 1436 cm^3 B) 1636 cm^3
C) 1346 cm^3 D) 1463 cm^3

62. What is the formula for finding volume of a hollow cylinder having outer radius 'R' inner radius 'r' and height 'h'?

- A) $\frac{4}{3} \pi (R^2 - r^2)h$ B) $\frac{2}{3} \pi (R^2 - r^2)h$
C) $\frac{\pi}{3} (R^2 - r^2)h$ D) $\pi (R^2 - r^2)h$

63. What does EMF stands for?

- A) Electro Motive Force B) Electro Magnetic Force
C) Electronic Magnetic Force D) Electromated Force

64. Which property of metal has its power of returning to its original shape after the applied force is released?

- A) Plasticity B) Malleability
C) Elasticity D) Tenacity

65. What is the decimal fraction of conversion of 18.5%?

- A) 0.185 B) 0.195
C) 0.175 D) 0.165

66. What is the total surface area of a cylinder having radius 2 metres and height 5 metres?

- A) 88 sq.metre B) 90 sq.metre
C) 86 sq.metre D) 92 sq.metre

67. Which insulating material is used for making switches?

- A) Bakelite B) Porcelain
C) PVC D) Ebonite

68. What is the power required? $I = 0.455 \text{ Amps}$ $R = 484 \text{ Ohms}$ $P = \text{ ___Watts}$

- A) 101.2 watts B) 99.2 watts
C) 98.2 watts D) 100.2 watts

69. What is the resistance? $I = 11.5 \text{ Amps}$ $V = 380 \text{ Volts}$ $R = \text{ ___Ohms}$

- A) 33 ohms B) 23 ohms
C) 13 ohms D) 43 ohms

70. What is the specific gravity of the solid, if density of the solid is 19.5 g/cm^3 ?

- A) 8 B) 18.5
C) 19 D) 19.5

71. Which law states that at constant temperature the current passing through a closed circuit is directly proportional to the potential difference and inversely proportional to the resistance?

- A) Ohm's law B) Lenz's law
C) Newton's law D) Hooke's law

72. What is the carbon percentage in medium carbon steel?

- A) 0.05% to 0.15% B) 0.25% to 0.5%
C) 0.5% to 1.5% D) 0.15% to 0.25%

73. Divide $(20/31)/(15/62)$

- A) $2(2/3)$ B) $2(4/3)$
C) $2(1/3)$ D) $2(3/2)$

74. What percentage of 80 is 20?

- A) 0.25 B) 0.2
C) 0.8 D) 0.4

75. What is the LCM of 12, 18, 6, 36?

- A) 12 B) 42
C) 18 D) 36

76. What is the total resistance if three resistances of 3 ohms, 9 ohms and 5 ohms are connected in series?

- A) 11 ohms B) $1/17$ ohms
C) 7 ohm D) 17 ohms

77. How many watts for 1 horse power in British system?

- A) 736 watts B) 756 watts
C) 746 watts D) 726 watts

78. What is the square root of 0.017?

- A) 0.13 B) 0.00001
C) 0.001 D) 0.000001

79. How many hours will take for a 100 watts bulb to consume 1 kwh energy? $W = 1 \text{ Kwh}$ $P = 100 \text{ Watts}$ $t = \text{ ___Hours}$

- A) 18 hours B) 12 hours
C) 10 hours D) 24 hours

80. What is the speed of a train of 80 metre long train passes a railway station platform of 120 metres length in 20 seconds?

- A) 32 km/hour B) 30 km/hour
C) 36 km/hour D) 34 km/hour

81. How much watt second in 1 watt hour?

- A) 3600 watt sec B) 2000 watt sec
C) 4000 watt sec D) 1000 watt sec

82. How many millimetres are there in 1 inch?

- A) 25.4 mm B) 2.45 mm
C) 2.54 mm D) 24.5 mm

83. What denotes letter M in MKS system?

- A) Mile B) Meter
C) Millimeter D) Micron

84. What is the name of furnace to obtained cast iron?

- A) Cupola B) Steel - Rever battery
C) Mild steel - Blast furnace D) Alloy metal - Electric furnace

85. What is the area of a circle of diameter 50 cm?

- A) 1952.5 cm^2 B) 1932.5 cm^2
C) 1962.5 cm^2 D) 1942.5 cm^2

86. Which statement is correct according to ohm's law?

- A) $I = V/R$ B) $I = R/V$
C) $I = R$ D) $I = 1/V$

87. What is the improper fraction for the given mixed fraction $7 \frac{3}{7}$

- A) " $\frac{7}{52}$ " B) $(\frac{52}{7})$
C) " $\frac{7}{28}$ " D) " $\frac{28}{7}$ "

88. What is the percentage of copper if the casting weight of copper 42.3 kg and tin weight 2.7 kg?

- A) Cu 96% B) Cu 94%
C) Cu 92% D) Cu 98%

89. What is the area of a rectangle, whose length and breadth are 10cm and 8cm respectively?

- A) 75 cm^2 B) 85 cm^2
C) 80 cm^2 D) 90 cm^2

90. What is the density (ρ) in g/cm^3 of an iron cube, if it weighs (W) 4.8 kg and volume (V) is 640 cm^3 ?

- A) 6.9 g/cm^3 B) 7.2 g/cm^3
C) 7.5 g/cm^3 D) 6.6 g/cm^3

91. How much work done in one hour, if a pump can raise 100 liters of water through a height of 200 meters in one minutes?

- A) $12 \times 10^7 \text{ kg meter}$ B) $12 \times 10^6 \text{ kg meter}$
C) $12 \times 10^5 \text{ kg meter}$ D) $12 \times 10^4 \text{ kg meter}$

92. Which is the unit electrical power?

- A) Watts B) Volts
C) Ampere D) Ohms

93. What is the flow of electrons in any conductor?

- A) Power B) Resistance
C) Voltage D) Current

94. What is the mass if the density of a body is 7.6 g/cm^3 and its volume is 25 cm^3 ?

- A) 210 grams B) 200 grams
C) 190 grams D) 220 grams

95. What is called if a body does not change its position with respect to its surroundings?

- A) Body at rest B) Velocity
C) Body at motion D) Speed

96. Which furnace is used to get pig iron from iron ore?

- A) Mild steel - Rever battery B) Blast furnace
C) Cupola D) Electric furnace

97. What is the unit for velocity?

- A) Metre/second B) Metre/second²
C) Metre/hour D) Metre/minute

98. What is the power if an emf of one volt causes a current flow of 1ampere?

- A) 1 Kilowatt hour B) 1 kilowatt
C) 1 watt D) 1 HP

99. What is the work done in joules if a load of 15.5 kg is lifted through a height of 4.4 metres?

- A) 669 Joules B) 639 Joules
C) 649 Joules D) 659 Joules

100. Which property of a substance is opposing the flow of electric current?

- A) Current B) EMF
C) Resistance D) Voltage

101. What is the rate of change of displacement of a body?

- A) Velocity B) Body at motion
C) Speed D) Body at rest

102. What is the side of a square whose area is 625 mm^2 ?

- A) 25 mm B) 15 mm
C) 20 mm D) 30 mm
-

103. What is the perimeter of a rectangle whose length and breadth are 20 cm and 18 cm?

- A) 66 cm B) 56 cm
C) 86 mm D) 76 cm
-

104. What is the formula for potential energy?

- A) $\frac{2}{3} mgh$ joule B) mgh joule
C) mgh^2 joule D) $\frac{1}{2} mgh$ joule
-

105. What is the work done in unit time?

- A) Power B) Energy
C) Force D) Acceleration
-

106. What is the total resistance if two resistances of 4 ohms and 6 ohms are connected in parallel?

- A) 4 B) 2.4
C) 10 D) 5
-

107. What is the specific gravity of the metal, if the piece of metal weighs 150 grams in air and 125 grams in water?

- A) 6 B) 15
C) 25 D) 10
-

108. What is the mass in gram, if a force of 15 dynes acting on a mass m producing an acceleration of 2.5 cm/sec^2 ?

- A) 6 grams B) 8 grams
C) 9 grams D) 7 grams
-

109. What is the work done, if a force of 250 newtons acted upon a body and the body has been moved through a distance of 15 metres?

- A) 3740 Joules B) 3730 Joules
C) 3750 Joules D) 3720 Joules
-

110. Which is equal to electric power?

- A) RI B) $R^2 I$ watts
C) $I^2 R$ watts D) IRA
-

111. What is the ratio of power output to power input?

- A) Energy B) Work
C) Acceleration D) Efficiency
-

112. What is the acceleration of an aeroplane taking off from landing field has to run 700 metres if it leaves the ground in

10 seconds from the start?

- A) 8 B) 10
 metre/sec^2 metre/sec^2
C) 14 D) 12
 metre/sec^2 metre/sec^2
-

113. What is the cross sectional area of a circular ring of $D = 38 \text{ mm}$ and $d = 32 \text{ mm}$?

- A) 320 mm^2 B) 340 mm^2
C) 350 mm^2 D) 330 mm^2
-

114. Which is the unit of resistance?

- A) Ampere B) Ohm
C) Watt D) Volt
-

115. Which is the unit of current?

- A) Ampere B) Watt
C) Volt D) Ohm
-

116. Which is the example for statically induced emf?

- A) Transformer B) Motor
C) Generator D) Refrigerator
-

117. What is the velocity of a body travels a distance of 168 metres in a line in 21 seconds?

- A) 10 m/sec B) 6 m/sec
C) 12 m/sec D) 8 m/sec
-

118. What is the resistance of an electric iron if the rating of electric iron is 220 V and 500 watts?

- A) 95.8 ohms B) 96.8 ohms
C) 97.8 ohms D) 94.8 ohms
-

119. What is the potential energy, if a body of mass 250 kg is at a height of 30 metres?

- A) 72.57 KJ B) 74.57 KJ
C) 75.57 KJ D) 73.57 KJ
-

120. Convert 0.456 decimal fraction into percentage?

- A) 0.000456 B) 0.456
C) 45.6 D) 0.0456
-

121. Which property of a metal possessed by it melts when heat is applied?

- A) Conductivity B) Malleability
C) Fusibility D) Tenacity
-

122. Which property of material enables to formation of permanent deformation without fracture?

- A) Brittleness
C) Plasticity
- B) Elasticity
D) Ductility

123. What is the kinetic energy of a bullet of mass 5gm travels with a speed of 500 m/sec?

- A) 625 Joules
C) 630 Joules
- B) 635 Joules
D) 620 Joules

124. Which metal cannot be forged?

- A) Mild steel
C) Steel
- B) Alloy steel
D) Cast iron

125. What is the unit of speed?

- A) Metre/minute
C) Metre/second²
- B) Metre/hour
D) Metre/second

126. Which alloy steel is using for making precious instrument?

- A) Vanadium
C) Invar steel
- B) Silicon steel
D) Manganese steel

127. What is the length of each part is a copper wire of 225 metre long is cut into 900 equal parts?

- A) 0.28 metre
C) 0.25 metre
- B) 0.29 metre
D) 0.23 metre

128. What is the unit of intensity of magnetic field?

- A) wb/m
C) Coloumb
- B) m/wb
D) Hertz

129. What is the volume (V) of mercury in cm³, if mass (m) of mercury is 1 kg and density (r) is 13.6 g/cm³?

- A) 73.53 cm³
C) 73.33 cm³
- B) 73.43 cm³
D) 73.23 cm³

130. What is the ore of aluminium?

- A) Mallatite
C) Bauxite
- B) Hematite
D) Lemonite

131. Find the curved surface area of a cylinder 10 cm dia and 20 cm height?

- A) 628 cm²
C) 620 cm²
- B) 630 cm²
D) 638 cm²

132. What are the two classifications of system of units?

- A) Metric and International
C) British and Metric
- B) Gravitational and non-gravitational
D) Fundamental and derived

133. Convert decimal 0.000659 to fraction?

- A) (659/1000)
C) (659/1000000)
- B) (659/10000)
D) (659/100000)

134. What is called the ratio between the density of a substances density of water at 4 Degree Centigrade?

- A) Weight
C) Mass
- B) Density
D) Specific gravity

135. What is the area of an equilateral triangle of side 450 mm?

- A) 886.82 cm²
C) 876.82 cm²
- B) 856.82 cm²
D) 866.82 cm²

136. What is called mass per unit volume of a substances?

- A) Volume
C) Weight
- B) Mass
D) Density

137. Which cast iron cannot be welded?

- A) Malleable cast iron
C) White cast iron
- B) Grey cast iron
D) Nodular cast iron

138. What is the area of an ellipse if the major and minor axes are 5 cm and 3 cm respectively?

- A) 27 cm²
C) 57 cm²
- B) 47 cm²
D) 37 cm²

139. Which is mineral insulator

- A) Glass
C) Porcelain
- B) Mica
D) Quartz

140. What is the density of aluminium?

- A) 3.7 g/cm³
C) 4.7 g/cm³
- B) 2.7 g/cm³
D) 5.7 g/cm³

141. What is the formula for acceleration?

- A) Metre/second
C) Metre/second²
- B) Metre/minute
D) Metre/hour

142. What is the equivalent unit for 1 horse power in metric system?

- A) 76 kg.m/sec
C) 78 kg.m/sec
- B) 77 kg.m/sec
D) 75 kg.m/sec

143. How many watts for 1 horse power in metric system?

- A) 725.5 watts
C) 735.5 watts
- B) 755.5 watts
D) 745.5 watts

144. What is the retardation of a car moving with a velocity of 50 km/hr is brought to rest in 45 seconds?

- A) 0.10 m/sec^2 B) 0.20 m/sec^2
C) 0.30 m/sec^2 D) 0.40 m/sec^2

145. How many liters of water a cylindrical tank of radius 75 cm and height 100 cm can hold?

- A) 1766.25 liters B) 1768.25 liters
C) 1767.25 liters D) 1769.25 liters

146. How many newtons for 1 kilogram?

- A) 9.81 Newtons B) 98.1 Newtons
C) 0.981 Newtons D) 981 Newtons

147. Which is the example for dynamically induced Emf?

- A) Motor B) Generator
C) Motor bike D) Car

148. What is the other name of low carbon steel?

- A) Mild steel B) High alloy steel
C) Low alloy steel D) High speed steel

149. What is the filament resistance if a 6 volt bulb draws a current of 0.5 Amps?

- A) 1.2 W B) 3 W
C) 12 W D) 10 W

150. What is called if a body changes its position with respect to its surroundings?

- A) Velocity B) Speed
C) Body at rest D) Body at motion

151. What is the area of a (A) semicircle whose dia is 20 cm (d)?

- A) 167.1 cm^2 B) 157.1 cm^2
C) 147.1 cm^2 D) 177.1 cm^2

152. What will be the rpm of smaller gear if a 180 mm dia meshes with 60 mm dia gear and the bigger gear makes 60 rpm?

- A) 180 rpm B) 140 rpm
C) 160 rpm D) 120 rpm

153. What is the capacity of a body to do work is called?

- A) Power B) Force
C) Acceleration D) Energy

154. What is termed as the quantity of matter contained in a body?

- A) Density B) Specific gravity
C) Volume D) Mass

155. What is the definition of ratio?

- A) Relation of two quantities of the different kind B) Relation of two quantities of the same kind
C) Equality between two ratios D) Inequality between two ratios

156. How much is 8% of 40 kg?

- A) 4.2 kg B) 2.2 kg
C) 3.2 kg D) 5.2 kg

157. What is the formula for induced emf?

- A) $BL \sin \theta$ volts B) $BLV \sin \theta$ volts
C) $B^2 L^2 V \sin \theta$ volts D) $B^2 L^2 V \sin \theta$ volts

158. Which is brittle metal?

- A) Mild steel B) Alloy steel
C) Cast iron D) Steel

159. Which one of the following properties is the mechanical properties of metal?

- A) Fusibility B) Ductility
C) Structure D) Corrosion

160. How many days a mechanic takes to assemble 64 machines if he assembles 8 machines in 3 days?

- A) 22 days B) 24 days
C) 26 days D) 20 days

161. What is the rated power if an adjustable resistor bears the following label 1.5 k ohms/ 0.08A?

- A) 9.2 watts B) 9.4 watts
C) 9.8 watts D) 9.6 watts

162. What is the volume of mercury in cm^3 , if the mass (m) of mercury is 136 grams (g) and density (r) of mercury is 13.6 g/cm^3 ?

- A) 136 cm^3 B) 10.6 cm^3
C) 13.6 cm^3 D) 10.0 cm^3

163. What is the formula for kinetic energy?

- A) $(2/3) mv^2$ joule B) $(2/3) mv$ joule
C) $(1/2) mv$ joule D) $(1/2) mv^2$ joule

164. Find the total surface area of cube whose side is 25 cm.

- A) 3740 cm² B) 3755 cm²
C) 3745 cm² D) 3750 cm²
-

- C) 2.848 kg D) 2.948 kg
-

165. What is the block weighs (W) in kg, if volume (V) is 320 cm³ and density 8.9 g/cm³?

- A) 2.648 kg B) 2.448

166. Which among the following is an insulator?

- A) Mica B) Aluminium
C) Silver D) Copper
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