

Duration: 30 Mins

Total Marks: 186

ID: ITISKILL49373Y

Student Name: _____

Roll No: _____

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

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

2. What is the ore of aluminium?

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

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

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

4. What is the formula for acceleration?

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

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

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

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

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

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

- A) 26 cm²
B) 36 cm²
C) 72 cm²
D) 324 cm²

8. What are fundamental units?

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

9. Which is the unit of current? | ಪ್ರವಾಹದ ಮೂಲಮಾನ ಯಾವುದು?

- A) Watt | ವ್ಯಾಟ್
B) Volt | ವೋಲ್ಟ್
C) Ohm | ಓಂ
D) Ampere | ಆಂಪಿಯರ್

10. What is the current Flow in the bulb?
 P = 550 watts
 R = 22 Ohms
 I = _____Amps

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

11. What is the mass in gram, if a force of 15 dyres acting on a mass m producing an acceleration of 2.5 cm/sec²?

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

12. What is known for the temperature at which any solid melts into liquid? | ಯಾವುದೇ ಘನ ದ್ರವಕ್ಕೆ ಕರಗುವ ತಾಪಮಾನಕ್ಕೆ ಏನು ಎಂದು ಕರೆಯಲಾಗುತ್ತದೆ?

- A) Melting point | ಕರಗುವ ಬಿಂದು
B) Boiling point | ಕುದಿಯುವ ಬಿಂದು
C) Latent heat of fusion | ಸುಷ್ಪ ಶಾಖ
D) Latent heat of vaporisation | ಆವಿಯಾಗುವಿಕೆಯ ಸುಷ್ಪ ಶಾಖ

13. Which steel is used for making files and cold chisel?

- A) Stainless steel
B) Low carbon steel
C) Midium carbon steel
D) High carbon steel

14. What is the value of tan 45° if sin 45° = 1/√2 ? | Sin 45° = 1/√2 ಆಗಿದ್ದರೆ tan 45° ಮೌಲ್ಯವೆಷ್ಟು?

(A) $\frac{1}{\sqrt{2}}$

(B) $\frac{\sqrt{3}}{2}$

(C) 1

(D) $\frac{1}{\sqrt{3}}$

A) C

B) D

C) A

D) B

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

- A) Density
B) Volume

C) Mass	D) Specific gravity
16. Which mechanical property of a metal offers resistance to elastic deformation in a cutting tool?	
A) Malleability	B) Hardness
C) Ductility	D) Toughness
17. What is the ratio of 4 kg to 800 grams?	
A) 08:04	B) 02:04
C) 05:01	D) 04:08
18. What is the equivalent unit for 1 horse power in metric system?	
A) 77 kg.m/sec	B) 78 kg.m/sec
C) 75 kg.m/sec	D) 76 kg.m/sec
19. Which property of a substance is opposing the flow of electric current?	
A) Voltage	B) Current
C) Resistance	D) EMF
20. What is called the ratio between the density of a substances density of water at 4 Degree Centigrade?	
A) Weight	B) Mass
C) Density	D) Specific gravity
21. 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) 3730 Joules	B) 3750 Joules
C) 3740 Joules	D) 3720 Joules
22. Which among the following is an insulator?	
A) Silver	B) Copper
C) Aluminium	D) Mica
23. How much watt second in 1 watt hour?	
A) 4000 watt sec	B) 1000 watt sec
C) 3600 watt sec	D) 2000 watt sec
24. Which rubber is used as insulator for power cables and control wires?	
A) Hypalone	B) Silicon
C) Nitrite butadiene	D) Butyl
25. 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

26. What are the two classifications of system of units?	
A) Fundamental and derived	B) Metric and International
C) Gravitational and non-gravitational	D) British and Metric
27. Convert 52% into fraction?	
A) (17/25)	B) (9/25)
C) (11/25)	D) (13/25)
28. What is the specific gravity of the metal, if the piece of metal weighs 150 grams in air and 125 grams in water?	
A) 15	B) 6
C) 10	D) 25
29. Find the curved surface area of a cylinder 10 cm dia and 20 cm height?	
A) 620 cm^2	B) 630 cm^2
C) 638 cm^2	D) 628 cm^2
30. Which property of metal has its power of returning to its original shape after the applied force is released?	
A) Tenacity	B) Elasticity
C) Malleability	D) Plasticity
31. 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) 13.6 cm^3
C) 10.0 cm^3	D) 10.6 cm^3
32. Which alloy steel is used to make permanent magnets?	
A) Vanadium steel	B) Manganese steel
C) Silicon steel	D) Cobalt steel
33. What is the name of the property of an insulation that should brake down or puncture on application of high voltage?	
A) Non absorption	B) Di-electric strength
C) Mechanical strenth	D) Specific resistance
34. What is called mass per unit volume of a substances?	
A) Mass	B) Volume
C) Density	D) Weight
35. What is the length L2, if total length (L) is 2.75 metre and $L1:L2 = 2:3$?	
A) 1.65 metre	B) 1.1 metre
C) 1.75 metre	D) 1.25 metre
36. What is the percentage of copper if the casting weight of	

copper 42.3 kg and tin weight 2.7 kg?

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

37. What is termed as the quantity of matter contained in a body? | ವಸ್ತುವಿನಲ್ಲಿ ಇರುವ ದ್ರವ್ಯದ ಪರಿಮಾಣವನ್ನು ಎಂದು ಏನು ಕರೆಯಲಾಗುತ್ತದೆ?

- A) Volume | ಗಾತ್ರ B) Specific gravity | ವಿಶಿಷ್ಟ ಗುರುತ್ವ
C) Mass | ದ್ರವ್ಯರಾಶಿ D) Density | ಸಾಂದ್ರತೆ

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

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

39. What is the square root of 529?

- A) 43 B) 23
C) 12 D) 33

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

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

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

- A) 39.39 cm B) 39.29 cm
C) 39.59 cm D) 39.49 cm

42. 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

43. What is the formual for induced emf?

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

44. Which cast iron cannot be welded?

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

45. What maximum height a stone will reach if it is thrown upwords with a velocity of 20m/sec?(g = 10m/sec²)

- A) 40 m B) 10 m
C) 20 m D) 30 m

46. 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) 73.33 cm³ B) 73.43 cm³
C) 73.53 cm³ D) 73.23 cm³

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

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

48. What is the ratio of power output to power input? | ವಿದ್ಯುತ್ ಉತ್ಪಾದನೆಯ ವಿದ್ಯುತ್ ಇನ್ಪುಟ್ ಅನುಪಾತ ಎಷ್ಟು?

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

49. How many newtons for 1 kilogram?

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

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

- A) 1952.5 cm² B) 1932.5 cm²
C) 1962.5 cm² D) 1942.5 cm²

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

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

52. Which one is non-metal?

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

53. Simplify: $\frac{3}{4} + \frac{2}{5} - \frac{5}{20}$

- A) $\frac{12}{10}$ B) $\frac{9}{10}$
C) $\frac{3}{10}$ D) $\frac{13}{10}$

54. What is the voltage?
 R = 250 Ohms
 I = 0.44 Amps
 V = ____Volts

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

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

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

56. What is the side of a square whose area is 625 mm²? | 625 ಮಿಮೀ² ವಿಸ್ತೀರ್ಣವಿರುವ ಚೌಕದ ಬದಿ ಎಷ್ಟು?

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

57. 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) 36 km/hour
B) 34 km/hour
C) 32 km/hour
D) 30 km/hour

58. Convert 0.456 decimal fraction into percentage?

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

59. What is the current? $R = 50 \text{ Ohms}$ 220 Volts
 $I = \text{_____Amps}$

- A) 4.2 Amps
B) 4.3 Amps
C) 4.1 Amps
D) 4.4 Amps

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

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

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

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

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

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

63. What is the density of aluminium?

- A) 4.7 g/cm^3
B) 5.7 g/cm^3
C) 2.7 g/cm^3
D) 3.7 g/cm^3

64. Which alloy used in electric lamp as filament?

- A) Silicon
B) Cobalt
C) Vanadium
D) Tungsten

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

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

66. What are the two classifications of system of units? |
ಮೂಲಮಾನಗಳ ವ್ಯವಸ್ಥೆಯ ಎರಡು ವರ್ಗೀಕರಣಗಳು ಯಾವುವು?

- A) British and Metric | ಬ್ರಿಟಿಷ್ ಮತ್ತು ಮೆಟ್ರಿಕ್
B) Fundamental and derived | ಮೂಲಭೂತ ಮತ್ತು ಪಡೆಯಲಾಗಿದೆ
C) Metric and International | ಮೆಟ್ರಿಕ್ ಮತ್ತು ಅಂತರರಾಷ್ಟ್ರೀಯ
D) Gravitational and non-gravitational | ಗುರುತ್ವ ಮತ್ತು ಗುರುತ್ವಾಕರ್ಷಣೆಯಿಲ್ಲದ್ದು

67. What is the flow of electrons in any conductor? | ಯಾವುದೇ

ಕಂಡಕ್ಟರ್‌ನಲ್ಲಿ ಎಲೆಕ್ಟ್ರಾನ್‌ಗಳ ಹರಿವನ್ನು ಏನು ಎಂದು ಕರೆಯಲಾಗುತ್ತದೆ??

- A) Resistance | ಪ್ರತಿರೋಧ
B) Voltage | ವೋಲ್ಟೇಜ್
C) Power | ಶಕ್ತಿ
D) Current | ಕರೆಂಟ್

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

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

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

- A) 24
B) 6
C) 2
D) 18

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

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

71. Which insulator is used in over head lines?

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

72. What is the unit of speed?

- A) Metre/second^2
B) Metre/minute
C) Metre/hour
D) Metre/second

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

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

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

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

75. What is the square root of decimal number 550.37?

- A) 22.46
B) 21.26
C) 22.26
D) 23.46

76. Convert decimal 0.000659 to fraction?

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

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

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

78. Which machine converts mechanical energy into electrical energy?

- A) Iron box
- B) Generator
- C) Battery
- D) Heater

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

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

80. 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) 10 hours
- C) 12 hours
- D) 24 hours

81. Which is the unit electrical power?

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

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

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

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

- A) 866.82 cm^2
- B) 886.82 cm^2
- C) 876.82 cm^2
- D) 856.82 cm^2

84. What is the weight force of a car has a mass of 800 kg? (Take $g = 9.81 \text{ m/sec}$)

- A) 7487 Newton
- B) 7847 Newton
- C) 7748 Newton
- D) 7848 Newton

85. Which is the example for dynamically induced Emf?

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

86. What denotes letter M in MKS system?

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

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

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

88. What is the formula for velocity?

- A) Displacement/Time
- B) Change of momentum/Time
- C) Change in velocity/Time
- D) Distance covered/Time

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

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

90. What is the block weighs (W) in kg, if volume (V) is 320 cm^3 and density 8.9 g/cm^3 ?

- A) 2.848 kg
- B) 2.948 kg
- C) 2.448
- D) 2.648 kg

91. Which is the example for statically induced emf?

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

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

- A) Rs 220
- B) Rs 240
- C) Rs 200
- D) Rs 260

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

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

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

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

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

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

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

97. Which is brittle metal?

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

98. What denotes letter μ in MKS system ವ್ಯವಸ್ಥೆಯಲ್ಲಿ μ ಎಂ ಅಕ್ಷರ ಏನನ್ನು ಸೂಚಿಸುತ್ತದೆ?

- A) Mile
- B) Micron

C) Meter

D) Millimeter

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

A) 2020 watts

B) 2010 watts

C) 2000 watts

D) 2030 watts

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

A) 20 mm

B) 15 mm

C) 30 mm

D) 25 mm

101. What is the square root of 0.017?

A) 0.000001

B) 0.13

C) 0.001

D) 0.00001

102. Which insulating material is used for making switches?

A) Bakelite

B) PVC

C) Ebonite

D) Porcelain

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

A) 98 mm

B) 78 mm

C) 88 mm

D) 68 mm

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

A) 72.57 KJ

B) 73.57 KJ

C) 74.57 KJ

D) 75.57 KJ

105. Which is mineral insulator

A) Porcelain

B) Quartz

C) Glass

D) Mica

106. 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) $12 \times 10^4 \text{ kg meter}$

D) $12 \times 10^5 \text{ kg meter}$

107. Which metal contains iron as a major content?

A) Brass metal

B) Zinc

C) Ferrous metal

D) Bronze metal

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

A) 5900 m^3

B) 6000 m^3

C) 6200 m^3

D) 6100 m^3

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

A) 0.20 m/sec^2

B) 0.40 m/sec^2

C) 0.30 m/sec^2

D) 0.10 m/sec^2

110. How many millimetres are there in 1 inch? | ಇಂಚಿನಲ್ಲಿ ಎಷ್ಟು ಮಿಲಿಮೀಟರ್‌ಗಳಿವೆ?

A) 2.45 mm

B) 25.4 mm

C) 24.5 mm

D) 2.54 mm

111. What is the definition of ratio?

A) Inequality between two ratios

B) Equality between two ratios

C) Relation of two quantities of the same kind

D) Relation of two quantities of the different kind

112. What is the voltage of the immersion heater? $P = 500 \text{ watts}$ $I = 2.27 \text{ Amps}$ $V = \text{_____Volts}$

A) 220.3 volts

B) 230.3 volts

C) 210.3 volts

D) 200.3 volts

113. Which law states about electromagnetic induction?

A) Hooke's law

B) Faraday's law

C) Ohm's law

D) Lenz's law

114. What is the formula for speed?

A) Change in velocity/Time

B) Distance covered/Time

C) Distance in definite direction /Time

D) Change in momentum/Time

115. What is the ratio of mechanical advantage to the velocity ratio of a simple machine? | ಸರಳ ಯಂತ್ರದ ಯಾಂತ್ರಿಕ ಲಾಭ ಮತ್ತು ವೇಗ ಅನುಪಾತ ದ ಅನುಪಾತ ಏನು?

A) Efficiency | ದಕ್ಷತೆ

B) Effort | ಪ್ರಯತ್ನ

C) Power | ಶಕ್ತಿ

D) Load | ಲೋಡ್

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

A) 10 Joules

B) 1 Joule

C) 1 dyne

D) 10 dynes

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

A) Velocity

B) Body at motion

C) Body at rest

D) Speed

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

A) Power

B) Acceleration

C) Force

D) Energy

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

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

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

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

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

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

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

- A) 3.166 B) 2.166
C) 6.166 D) 1.166

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

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

124. Which metal cannot be forged?

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

125. How much is 8% of 40 kg?

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

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

- A) 57 cm^2 B) 27 cm^2
C) 37 cm^2 D) 47 cm^2

127. How many millimetres are there in 1 inch?

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

128. What does EMF stands for?

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

129. What is called if a body posses only magnitude or size alone?

- A) Speed B) Vector quantity

C) Scalar quantity

D) Velocity

130. Which is same in series connection of resistors in a circuit?

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

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

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

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

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

133. What percentage of 80 is 20?

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

134. 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) 120 rpm B) 180 rpm
C) 140 rpm D) 160 rpm

135. What is called mass per unit volume of a substances? | ವಸ್ತುವಿನ ಪ್ರತಿ ಯೂನಿಟ್ ಪರಿಮಾಣದ ದ್ರವ್ಯರಾಶಿಗೆ ಏನು ಎಂದು ಕರೆಯಲಾಗುತ್ತದೆ?

- A) Density | ಸಾಂದ್ರತೆ B) Volume | ಗಾತ್ರ
C) Weight | ತೂಕ D) Mass | ದ್ರವ್ಯರಾಶಿ

136. What is the S.I unit of heat? | ಶಾಖದ ವಸ್ತು ಮೂಲಮಾನ ಯಾವುದು?

- A) Centigrade heat unit | ಸೆಂಟಿಗ್ರೇಡ್ ಶಾಖ ಘಟಕ B) British thermal unit | ಬ್ರಿಟಿಷ್ ಉಷ್ಣ ಘಟಕ
C) Calorie | ಕ್ಯಾಲೋರಿ D) Joule | ಜೋಲ್

137. Which is very good conductor?

- A) Copper B) Steel
C) Cast iron D) Wrought iron

138. Which is equal to $\sin\theta$? | ಯಾವುದು $\sin\theta$ ಗೆ ಸಮಾನ?

- (A) $\frac{\text{Opposite side}}{\text{Hypotenuse}}$
- (B) $\frac{\text{Hypotenuse}}{\text{Opposite side}}$
- (C) $\frac{\text{Adjacent side}}{\text{Hypotenuse}}$
- (D) $\frac{\text{Hypotenuse}}{\text{Adjacent side}}$

- A) C
C) D
- B) B
D) A

139. What is the product of 0.003×0.5 ?

- A) 0.15
C) 0.015
- B) 0.00015
D) 0.0015

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

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

141. What is the work done in unit time?

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

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

- A) 13.89
C) 13.79
- B) 13.69
D) 13.99

143. How many ergs for 1 Joule?

- A) 10^5 ergs
C) 10^3 ergs
- B) 10^9 ergs
D) 10^7 ergs

144. Convert 0.456 decimal fraction into percentage? | 0.456 ದಶಮಾಂಶ ಭಾಗವನ್ನು ಶೇಕಡಾವಾರು ಆಗಿ ಪರಿವರ್ತಿಸಿ?

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

145. How many watts for 1 horse power in British system? | ಬ್ರಿಟಿಷ್ ವ್ಯವಸ್ಥೆಯಲ್ಲಿ 1 ಕುದುರೆ ಶಕ್ತಿಗಾಗಿ (HP) ಎಷ್ಟು ವ್ಯಾಟ್?

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

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

- A) Velocity
C) Scalar quantity
- B) Vector quantity
D) Speed

147. Which is equal to electric power?

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

148. 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) 0.69 m/sec^2
C) 0.59 m/sec^2
- B) 0.069 m/sec^2
D) 0.059 m/sec^2

149. 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) 7.5 g/cm^3
C) 6.9 g/cm^3
- B) 6.6 g/cm^3
D) 7.2 g/cm^3

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

- A) 3745 cm^2
C) 3750 cm^2
- B) 3755 cm^2
D) 3740 cm^2

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

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

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

- A) 21 m^3
C) 41 m^3
- B) 31 m^3
D) 11 m^3

153. What metals contained in brass alloy?

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

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

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

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

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

156. What is the potential energy in a body of mass 10 kg kept on the top of a pole 20 metres height?

- A) 1962 Joules
C) 1952 Joules
- B) 1942 Joules
D) 1972 Joules

157. What is the formula for finding volume of a hollow

cylinder having outer radius 'R' inner radius 'r' and height 'h'?

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

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

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

159. What is the formula for potential energy?

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

160. 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

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

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

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

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

163. 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) 12 metre/sec² B) 8 metre/sec²
C) 14 metre/sec² D) 10 metre/sec²

164. What is the unit for velocity?

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

165. What is the area of a sector of a circle of radius 5 cm and its angle is 96 Degree?

- A) 20.39 cm^2 B) 20.98 cm^2
C) 20.89 cm^2 D) 20.93 cm^2

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

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

167. What is the square root of 529? | 529 ರ ವರ್ಗಮೂಲ ಯಾವುದು?

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

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

- A) 400 volts B) 395 volts
C) 390 volts D) 405 volts

169. Which is the unit of resistance?

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

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

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

171. What is the formula for kinetic energy?

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

172. What is the area of a rectangle, whose length and breadth are 10cm and 8cm respectively? | ಉದ್ದ ಮತ್ತು ಅಗಲ ಕ್ರಮವಾಗಿ 10 ಸೆಂ.ಮೀ ಮತ್ತು 8 ಸೆಂ.ಮೀ. ಇರುವ ಆಯತದ ವಿಸ್ತೀರ್ಣ ಎಷ್ಟು?

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

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

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

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

- A) 1847 c.c B) 1844 c.c
C) 1842 c.c D) 1846 c.c

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

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

176. What is the boiling point of water? | ನೀರಿನ ಕುದಿಯುವ ಬಿಂದು ಯಾವುದು?

- A) 212°C
C) 100°C

- B) 32°C
D) 0°C

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

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

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

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

179. What is the resistance? $I = 11.5$ Amps $V = 380$ Volts $R = \underline{\hspace{2cm}}$ Ohms

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

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

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

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

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

182. What are fundamental units? | ಮೂಲಭೂತ ಮೂಲಮಾನಗಳು ಯಾವುವು?

- A) Length, Mass, Area | ಉದ್ದ, ದ್ರವ್ಯರಾಶಿ, ವಿಸ್ತೀರ್ಣ
B) Length, Mass, Volume | ಉದ್ದ, ದ್ರವ್ಯರಾಶಿ, ಘನ ಫಲ
C) Length, Mass, Time | ಉದ್ದ, ದ್ರವ್ಯರಾಶಿ, ಸಮಯ
D) Length, Pressure, Volume | ಉದ್ದ, ಒತ್ತಡ, ಘನ ಫಲ

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

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

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

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

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

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

186. Which is the unit of current?

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