

17. How much watt second in 1 watt hour?

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

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

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

19. Which is equal to electric power?

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

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

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

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

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

22. What is the voltage of the immersion heater?

$P = 500$ watts

$I = 2.27$ Amps

$V =$ _____ Volts

- A) 200.3 volts
B) 210.3 volts
C) 220.3 volts (Correct)
D) 230.3 volts

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

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

24. Which law states about electromagnetic induction?

- A) Ohm's law
B) Hooke's law
C) Lenz's law (Incorrect)
D) **Faraday's law**

25. What is the formal for induced emf?

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

26. What does EMF stands for?

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

27. Which is the example for statically induced emf?

- A) Generator
B) Motor
C) **Transformer**
D) Refrigerator (Incorrect)

28. Which is the example for dynamically induced Emf?

- A) Motor
B) **Generator (Correct)**
C) Car
D) Motor bike

29. Which is the unit electrical power?

- A) Volts
B) Ohms
C) **Watts (Correct)**
D) Ampere

30. What is the current Flow in the bulb?

$P = 550$ watts

$R = 22$ Ohms

$I =$ _____ Amps

A) 2 Amps

B) 3 Amps

C) 4 Amps

D) 5 Amps (Correct)

31. What is the power required?

$I = 0.455$ Amps

$R = 484$ Ohms

$P =$ _____ Watts

A) 98.2 watts

B) 99.2 watts (Incorrect)

C) **100.2 watts**

D) 101.2 watts

32. 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 (Incorrect)

C) **9.6 watts**

D) 9.8 watts

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

A) 390 volts

B) 395 volts

C) **400 volts**

D) 405 volts (Incorrect)

34. How many hours will take for a 100 watts bulb to consume 1 kwh energy?

$W = 1$ Kwh

$P = 100$ Watts

$t =$ _____ Hours

A) 10 hours

B) 12 hours (Incorrect)

C) 18 hours

D) 24 hours

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

- A) Density (Incorrect) B) Volume
C) **Mass** D) Specific gravity

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

- A) Mass **B) Weight**
C) Volume D) Density (Incorrect)

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

- A) Mass B) Weight
C) **Density (Correct)** D) Volume

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

- A) Density (Incorrect) **B) Specific gravity**
C) Mass D) Weight

39. What is the density of aluminium?

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

40. What is the mass if the density of a body is 7.6 g/cm³ and its volume is 25 cm³?

- A) 190 grams** B) 200 grams
C) 210 grams D) 220 grams (Incorrect)

41. What is the specific gravity of the solid, if density of the solid is 19.5 g/cm³?

- A) 8 B) 18.5
C) 19 (Incorrect) **D) 19.5**

42. What is the density (r) in g/cm³ of an iron cube, if it weighs (W) 4.8 kg and volume (V) is 640 cm³?

- A) 6.6 g/cm³ (Incorrect) B) 6.9 g/cm³
C) 7.2 g/cm³ **D) 7.5 g/cm³**

43. 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** B) 73.43 cm³
C) 73.33 cm³ D) 73.23 cm³ (Incorrect)

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

- A) 9 grams B) 8 grams

C) 7 grams (Incorrect)

D) 6 grams

45. 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) 10
C) 15 D) 25 (Incorrect)

46. What is the volume of mercury in cm³, if the mass (m) of mercury is 136 grams (g) and density (r) of mercury is 13.6 g/cm³?

- A) 136 cm³ B) 13.6 cm³ (Incorrect)
C) 10.6 cm³ **D) 10.0 cm³**

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

- A) 2.948 kg **B) 2.848 kg**
C) 2.648 kg (Incorrect) D) 2.448

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

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

49. What is the weight force of a car has a mass of 800 kg? (Take g = 9.81 m/sec²)

- A) 7848 Newton** B) 7748 Newton (Incorrect)
C) 7847 Newton D) 7487 Newton

50. Which one is non-metal?

- A) Mercury **B) Graphite**
C) Brass (Incorrect) D) Iron

51. Which metal contains iron as a major content?

- A) Brass metal (Incorrect) B) Bronze metal
C) Zinc **D) Ferrous metal**

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

- A) Ferrous metals **B) Non-ferrous metals**
C) Insulating metals (Incorrect) D) Non-Insulating metals

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

- A) Fusibility **B) Ductility**
C) Corrosion (Incorrect) D) Structure

54. Which is brittle metal?

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

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

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

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

- A) Elasticity (Incorrect)
B) **Plasticity**
C) Ductility
D) Brittleness

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

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

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

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

59. Which alloy used in electric lamp as filament?

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

60. What metals contained in brass alloy?

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

61. Which cast iron cannot be welded?

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

62. Which metal cannot be forged?

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

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

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

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

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

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

- A) Cupola**
B) Mild steel - Blast furnace

- C) Steel - Rever battery
D) Alloy metal - Electric furnace (Incorrect)

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

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

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

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

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

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

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

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

70. What is the ore of aluminium?

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

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

- A) Ductility**
C) Hardness
B) Malleability
D) Brittleness (Incorrect)

72. Which among the following is an insulator?

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

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

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

74. Which alloy steel is used to make permanent magnets?

- A) Silicon steel
C) Vanadium steel
B) Manganese steel (Incorrect)
D) Cobalt steel

75. Which insulator is used in over head lines?

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

76. Which insulating material is used for making switches?

- A) Porcelain
B) PVC

C) Bakelite

D) Ebonite (Incorrect)

77. What is the name of the property of an insulation that should brake down or puncture on application of high voltage?

A) Di-electric strength

B) Specific resistance (Incorrect)

C) Mechanical strenth

D) Non absorption

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

A) Silicon steel

B) Manganese steel

C) Invar steel (Correct)

D) Vanadium

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

A) Low carbon steel

B) Midium carbon steel

C) High carbon steel (Correct)

D) Stainless steel

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

A) 26 cm² (Incorrect)

B) 36 cm²

C) 72 cm²

D) 324 cm² (Correct)

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

A) 39.29 cm

B) 39.39 cm

C) 39.49 cm

D) 39.59 cm (Correct)

82. What is the side of a square whose area is 625 mm²?

A) 15 mm

B) 20 mm

C) 25 mm (Correct)

D) 30 mm

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

A) 56 cm

B) 66 cm

C) 76 cm (Correct)

D) 86 mm

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

A) 75 cm² (Incorrect)

B) 80 cm² (Correct)

C) 85 cm²

D) 90 cm²

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

A) 20 sq.cm

B) 25 sq.cm (Correct)

C) 30 sq.cm

D) 35 sq.cm

86. What is the primeter of scalene. Triangle having sides of

40mm, 20mm and 28mm?

A) 68 mm

B) 78 mm

C) 88 mm (Correct)

D) 98 mm

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

A) 856.82 cm²

B) 866.82 cm² (Incorrect)

C) 876.82 cm² (Correct)

D) 886.82 cm²

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

A) 1932.5 cm²

B) 1942.5 cm² (Incorrect)

C) 1952.5 cm²

D) 1962.5 cm² (Correct)

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

A) 147.1 cm² (Incorrect)

B) 157.1 cm² (Correct)

C) 167.1 cm²

D) 177.1 cm²

90. What is the cross sectional area of a circular ring of D = 38 mm d = 32mm?

A) 320 mm²

B) 330 mm² (Correct)

C) 340 mm²

D) 350 mm²

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

A) 20.39 cm²

B) 20.93 cm² (Correct)

C) 20.89 cm² (Incorrect)

D) 20.98 cm²

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

A) 27 cm²

B) 37 cm² (Incorrect)

C) 47 cm² (Correct)

D) 57 cm²

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

A) 3740 cm²

B) 3745 cm²

C) 3750 cm² (Correct)

D) 3755 cm² (Incorrect)

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

A) 1340 m²

B) 1440 m² (Correct)

C) 1540 m²

D) 1640 m²

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

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

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

- A) 5900 m^3 (Incorrect)
C) 6100 m^3
- B) 6000 m^3
D) 6200 m^3

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

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

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

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

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

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

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

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

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

- A) **1766.25 liters**
C) 1768.25 liters (Incorrect)
- B) 1767.25 liters
D) 1769.25 liters

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

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

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

- A) 620 cm^2
C) 630 cm^2
- B) **628 cm^2 (Correct)**
D) 638 cm^2

104. What is the formula for speed?

- A) **Distance covered/Time (Correct)**
C) Distance in definite direction /Time
- B) Change in velocity/Time
D) Change in momentum/Time

105. What is the unit of speed?

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

106. What is the formula for velocity?

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