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Score: 30/104 (28.85%)

Code: 7285

1. Which machine converts mechanical energy into electrical energy?

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

2. Which is the unit of current?

- A) Ampere (Correct)**
C) Ohm
B) Volt
D) Watt

3. Which is the unit of resistance?

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

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

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

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

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

6. Which is very good conductor?

- A) Copper**
C) Wrought iron
B) Cast iron (Incorrect)
D) Steel

7. Which is mineral insulator

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

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

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

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

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

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

- A) Current**
B) Voltage

C) Resistance (Incorrect) D) Power

11. 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**
C) Newton's law
B) Lenz's law
D) Hooke's law (Incorrect)

12. What is the resistance?

I = 11.5 Amps

V = 380 Volts

R = _____ Ohms

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

13. What is the current?

R = 50 Ohms

220 Volts

I = _____ Amps

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

14. What is the voltage?

R = 250 Ohms

I = 0.44 Amps

V = _____ Volts

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

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

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

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

- A) 12 W (Correct)**
C) 3 W
B) 10 W
D) 1.2 W

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
B) 1 kilowatt (Incorrect)
C) 1 HP
D) 1 Kilowatt hour

19. Which is equal to electric power?

- A) $R^2 I$ watts (Incorrect)
B) $I^2 R$ watts
C) RI
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 (Correct)
B) 2010 watts
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 (Incorrect)
C) 220.3 volts
D) 230.3 volts

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

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

24. Which law states about electromagnetic induction?

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

25. What is the formula for induced emf?

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

26. What does EMF stands for?

- A) Electronic Magnetic Force
B) Electro Motive Force (Correct)

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
C) Car
D) Motor bike (Incorrect)

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 (Incorrect)
D) 5 Amps

31. What is the power required?

$I = 0.455$ Amps

$R = 484$ Ohms

$P =$ _____ Watts

- A) 98.2 watts (Incorrect)
B) 99.2 watts
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
C) 9.6 watts
D) 9.8 watts (Incorrect)

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 (Incorrect)
C) 400 volts
D) 405 volts

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

C) 18 hours (Incorrect)

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 (Correct)

C) Volume

D) Density

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

A) Mass

B) Weight (Incorrect)

C) Density

D) Volume

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

A) Density

B) Specific gravity (Correct)

C) Mass

D) Weight

39. What is the density of aluminium?

A) 2.7 g/cm³

B) 3.7 g/cm³

C) 4.7 g/cm³ (Incorrect)

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 (Incorrect)

C) 210 grams

D) 220 grams

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

B) 6.9 g/cm³ (Incorrect)

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 (Incorrect)

D) 73.23 cm³

44. What is the mass in gram, if a force of 15 dyne acting on

a mass m producing an acceleration of 2.5 cm/sec²?

A) 9 grams (Incorrect)

B) 8 grams

C) 7 grams

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 (Incorrect)

D) 25

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 (Incorrect)

B) 2.848 kg

C) 2.648 kg

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 (Incorrect)

C) 2.166

D) 1.166

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

C) 7847 Newton

D) 7487 Newton (Incorrect)

50. Which one is non-metal?

A) Mercury

B) Graphite (Correct)

C) Brass

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 does not contain iron?

A) Ferrous metals

B) Non-ferrous metals (Correct)

C) Insulating metals

D) Non-Insulating metals

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

A) Fusibility (Incorrect)

B) Ductility

C) Corrosion

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 (Correct)** D) Toughness

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 B) Tenacity
C) **Elasticity (Correct)** D) Plasticity

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

- A) Conductivity B) Malleability (Incorrect)
C) **Fusibility** D) Tenacity

59. Which alloy used in electric lamp as filament?

- A) Cobalt B) Vanadium
C) **Tungsten (Correct)** D) Silicon

60. What metals contained in brass alloy?

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

61. Which cast iron cannot be welded?

- A) Grey cast iron B) **White cast iron (Correct)**
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 (Correct)** B) White cast iron
C) Malleable cast iron 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 (Incorrect)
C) Steel - Rever battery D) Alloy metal - Electric furnace

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

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

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

- A) 0.05% to 0.15% B) 0.15% to 0.25% (Incorrect)
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% B) 0.15% to 0.25%
C) 0.25% to 0.50% D) **0.50% to 1.50% (Correct)**

70. What is the ore of aluminium?

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

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

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

72. Which among the following is an insulator?

- A) Copper B) Aluminium
C) Silver D) **Mica (Correct)**

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 B) Manganese steel (Incorrect)
C) Vanadium steel D) **Cobalt steel**

75. Which insulator is used in over head lines?

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

76. Which insulating material is used for making switches?

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

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 (Correct)**
C) Mechanical strenth
B) Specific resistance
D) Non absorption

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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
C) 88 mm
B) 78 mm (Incorrect)
D) 98 mm

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

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

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

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

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

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

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

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

91. 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
C) 20.89 cm^2
B) **20.93 cm^2 (Correct)**
D) 20.98 cm^2

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

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

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

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

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

- A) 1340 m^2
B) 1440 m^2 (Correct)

C) 1540 m^2 D) 1640 m^2

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

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

96. 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) 6100 m^3 (Incorrect) D) 6200 m^3

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

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

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

- A) **1436 cm^3** B) 1463 cm^3 (Incorrect)
C) 1346 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) **$\pi (R^2 - r^2)h$** B) $\pi/3 (R^2 - r^2)h$
C) $2/3 \pi (R^2 - r^2)h$ D) $4/3 \pi (R^2 - r^2)h$ (Incorrect)

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

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

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

- A) **1766.25 liters (Correct)** B) 1767.25 liters
C) 1768.25 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 B) **88 sq.metre**
C) 90 sq.metre (Incorrect) D) 92 sq.metre

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

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

104. What is the formula for speed?

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