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Score: 25/104 (24.04%)

Code: 2804

1. Which machine converts mechanical energy into electrical energy?

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

2. Which is the unit of current?

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

3. Which is the unit of resistance?

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

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

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

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

- A) Current (Incorrect)      B) Voltage  
**C) Resistance**      D) EMF

6. Which is very good conductor?

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

7. Which is mineral insulator

- A) Glass (Incorrect)      B) Quartz  
**C) Mica**      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 (Incorrect)      B) 7 ohm  
**C) 17 ohms**      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 (Incorrect)      **B) 2.4**  
C) 5      D) 4

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

- A) Current (Correct)**      B) Voltage

C) Resistance

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 (Correct)**      B) Lenz's law  
C) Newton's law      D) Hooke's law

12. What is the resistance?

<br>

I = 11.5 Amps

<br>

V = 380 Volts

<br>

R = \_\_\_\_\_ Ohms

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

13. What is the current?

<br>

R = 50 Ohms

<br>

220 Volts

<br>

I = \_\_\_\_\_ Amps

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

14. What is the voltage?

<br>

R = 250 Ohms

<br>

I = 0.44 Amps

<br>

V = \_\_\_\_\_ Volts

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

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

- A)  $I = 1/V$  (Incorrect)      B)  $I = R$   
**C)  $I = V/R$**       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)**      B) 10 W  
C) 3 W      D) 1.2 W

17. How much watt second in 1 watt hour?

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

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

- 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 (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 (Incorrect) B) 210.3 volts  
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 (Incorrect) B) Hooke's law  
C) Lenz's law D) Faraday's law

25. What is the formual for induced emf?

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

28. Which is the example for dynamicallly induced Emf?

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

29. Which is the unit electrical power?

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

30. What is the current Flow in the bulb?

$P = 550$  watts

$R = 22$  Ohms

$I =$  \_\_\_\_\_ Amps

- A) 2 Amps (Incorrect) B) 3 Amps  
C) 4 Amps 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 (Incorrect) B) 9.4 watts  
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 (Incorrect) B) 395 volts  
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 (Correct)**

B) 12 hours

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 (Incorrect)

**B) Weight**

C) Volume

D) Density

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

A) Mass (Incorrect)

B) Weight

**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 (Incorrect)

**B) Specific gravity**

C) Mass

D) Weight

39. What is the density of aluminium?

**A) 2.7 g/cm<sup>3</sup> (Correct)**

B) 3.7 g/cm<sup>3</sup>

C) 4.7 g/cm<sup>3</sup>

D) 5.7 g/cm<sup>3</sup>

40. What is the mass if the density of a body is 7.6 g/cm<sup>3</sup> and its volume is 25 cm<sup>3</sup>?

**A) 190 grams (Correct)**

B) 200 grams

C) 210 grams

D) 220 grams

41. What is the specific gravity of the solid, if density of the solid is 19.5 g/cm<sup>3</sup>?

A) 8 (Incorrect)

B) 18.5

C) 19

**D) 19.5**

42. What is the density (r) in g/cm<sup>3</sup> of an iron cube, if it weighs (W) 4.8 kg and volume (V) is 640 cm<sup>3</sup>?

A) 6.6 g/cm<sup>3</sup> (Incorrect)

B) 6.9 g/cm<sup>3</sup>

C) 7.2 g/cm<sup>3</sup>

**D) 7.5 g/cm<sup>3</sup>**

43. What is the volume (V) of mercury in cm<sup>3</sup>, if mass (m) of mercury is 1 kg and density (r) is 13.6 g/cm<sup>3</sup>?

**A) 73.53 cm<sup>3</sup> (Correct)**

B) 73.43 cm<sup>3</sup>

C) 73.33 cm<sup>3</sup>

D) 73.23 cm<sup>3</sup>

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/sec<sup>2</sup>?

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 (Correct)**

B) 10

C) 15

D) 25

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

A) 136 cm<sup>3</sup> (Incorrect)

B) 13.6 cm<sup>3</sup>

C) 10.6 cm<sup>3</sup>

**D) 10.0 cm<sup>3</sup>**

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

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 the weighs 6.5 kgf in air and 3.5 kgf in water?

A) 6.166 (Incorrect)

B) 3.166

**C) 2.166**

D) 1.166

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

**A) 7848 Newton (Correct)**

B) 7748 Newton

C) 7847 Newton

D) 7487 Newton

50. Which one is non-metal?

A) Mercury (Incorrect)

**B) Graphite**

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 do not contain iron?

A) Ferrous metals (Incorrect)

**B) Non-ferrous metals**

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 (Incorrect)      B) Malleability  
**C) Hardness**      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 (Incorrect)      B) Tenacity  
**C) Elasticity**      D) Plasticity

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

- A) Conductivity (Incorrect)      B) Malleability  
**C) Fusibility**      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 (Incorrect)      B) Copper and lead  
**C) Copper and zinc**      D) Copper and tin

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 (Incorrect)      B) Mild steel  
C) Steel      **D) Cast iron**

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 (Incorrect)      B) Electric furnace  
**C) Blast furnace**      D) Cupola

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

- A) Cupola (Correct)**      B) Mild steel - Blast furnace  
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% (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 (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 (Correct)**      B) Malleability  
C) Hardness      D) Brittleness

72. Which among the following is an insulator?

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

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

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

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

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

75. Which insulator is used in over head lines?

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

76. Which insulating material is used for making switches?

A) Porcelain (Incorrect)

**C) Bakelite**

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 (Incorrect)

**C) High carbon steel**

B) Midium carbon steel

D) Stainless steel

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

A)  $26\text{ cm}^2$  (Incorrect)

C)  $72\text{ cm}^2$

B)  $36\text{ cm}^2$

**D)  $324\text{ cm}^2$**

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

A) 39.29 cm (Incorrect)

C) 39.49 cm

B) 39.39 cm

**D) 39.59 cm**

82. What is the side of a square whose area is  $625\text{ mm}^2$ ?

A) 15 mm (Incorrect)

**C) 25 mm**

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 (Incorrect)

**C) 76 cm**

B) 66 cm

D) 86 mm

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

A)  $75\text{ cm}^2$  (Incorrect)

C)  $85\text{ cm}^2$

**B)  $80\text{ cm}^2$**

D)  $90\text{ cm}^2$

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

A) 20 sq.cm (Incorrect)

C) 30 sq.cm

**B) 25 sq.cm**

D) 35 sq.cm

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

A) 68 mm (Incorrect)

**C) 88 mm**

B) 78 mm

D) 98 mm

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

A)  $856.82\text{ cm}^2$  (Incorrect)

**C)  $876.82\text{ cm}^2$**

B)  $866.82\text{ cm}^2$

D)  $886.82\text{ cm}^2$

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

A)  $1932.5\text{ cm}^2$  (Incorrect)

C)  $1952.5\text{ cm}^2$

B)  $1942.5\text{ cm}^2$

**D)  $1962.5\text{ cm}^2$**

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

A)  $147.1\text{ cm}^2$  (Incorrect)

C)  $167.1\text{ cm}^2$

**B)  $157.1\text{ cm}^2$**

D)  $177.1\text{ cm}^2$

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

A)  $320\text{ mm}^2$  (Incorrect)

C)  $340\text{ mm}^2$

**B)  $330\text{ mm}^2$**

D)  $350\text{ mm}^2$

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

A)  $20.39\text{ cm}^2$  (Incorrect)

C)  $20.89\text{ cm}^2$

**B)  $20.93\text{ cm}^2$**

D)  $20.98\text{ cm}^2$

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

A)  $27\text{ cm}^2$  (Incorrect)

**C)  $47\text{ cm}^2$**

B)  $37\text{ cm}^2$

D)  $57\text{ cm}^2$

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

A)  $3740\text{ cm}^2$  (Incorrect)

**C)  $3750\text{ cm}^2$**

B)  $3745\text{ cm}^2$

D)  $3755\text{ cm}^2$

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

A)  $1340\text{ m}^2$  (Incorrect)

C)  $1540\text{ m}^2$

**B)  $1440\text{ m}^2$**

D)  $1640\text{ m}^2$

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)  $\pi rh$       D)  $2\pi rh$

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

- A)  $5900\text{ m}^3$  (Incorrect)      B)  $6000\text{ m}^3$  (Correct)  
C)  $6100\text{ m}^3$       D)  $6200\text{ m}^3$

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

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

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

- A)  $1436\text{ cm}^3$  (Correct)      B)  $1463\text{ cm}^3$   
C)  $1346\text{ cm}^3$       D)  $1636\text{ cm}^3$

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

- A)  $\pi(R^2 - r^2)h$  (Correct)      B)  $\frac{\pi}{3}(R^2 - r^2)h$   
C)  $\frac{2}{3}\pi(R^2 - r^2)h$       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)  $11\text{ m}^3$  (Incorrect)      B)  $21\text{ m}^3$  (Correct)  
C)  $31\text{ m}^3$       D)  $41\text{ m}^3$

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 (Incorrect)      B) 88 sq.metre (Correct)  
C) 90 sq.metre      D) 92 sq.metre

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

- A)  $620\text{ cm}^2$  (Incorrect)      B)  $628\text{ cm}^2$  (Correct)  
C)  $630\text{ cm}^2$       D)  $638\text{ cm}^2$

104. What is the formula for speed?

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