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Score: 13/50 (26.00%)

Code: 1026

1. Which machine converts mechanical energy into electrical energy?

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

2. Which is the unit of resistance?

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

3. Which is mineral insulator

- A) Glass  
 B) Quartz  
 C) **Mica (Correct)**  
 D) Porcelain

4. 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

5. What is the resistance?

<br>  
 $I = 11.5$  Amps  
 <br>  
 $V = 380$  Volts  
 <br>  
 $R = \underline{\hspace{2cm}}$  Ohms

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

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

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

7. 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  
 C) 2020 watts (Incorrect)  
 D) 2030 watts

8. 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

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

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

10. What is the power required?

<br>  
 $I = 0.455$  Amps  
 <br>  
 $R = 484$  Ohms  
 <br>  
 $P = \underline{\hspace{2cm}}$  Watts

- A) 98.2 watts  
 B) 99.2 watts (Incorrect)  
 C) **100.2 watts**  
 D) 101.2 watts

11. 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

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

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

13. 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)

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

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

15. 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

16. 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  
 B) 8 grams  
 C) 7 grams (Incorrect)  
 D) **6 grams**

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

A) 6.166

**C) 2.166**

B) 3.166 (Incorrect)

D) 1.166

C) 85 cm<sup>2</sup>

D) 90 cm<sup>2</sup> (Incorrect)

18. Which one is non-metal?

A) Mercury

C) Brass (Incorrect)

**B) Graphite**

D) Iron

19. Which is brittle metal?

**A) Cast iron**

C) Mild steel

B) Steel (Incorrect)

D) Alloy steel

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

A) Conductivity

**C) Fusibility**

B) Malleability

D) Tenacity (Incorrect)

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

A) 0.02% to 0.03%

C) 0.25% to 0.50%

B) 0.15% to 0.25% (Incorrect)

**D) 0.50% to 1.50%**

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

A) Butyl

**C) Silicon (Correct)**

B) Hypalone

D) Nitrite butadiene

23. Which insulator is used in over head lines?

A) Mica

C) P.V.C

B) Rubber

**D) Porcelain**

24. 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

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

A) 39.29 cm

C) 39.49 cm (Incorrect)

B) 39.39 cm

**D) 39.59 cm**

26. What is the side of a square whose area is 625 mm<sup>2</sup>?

A) 15 mm

**C) 25 mm (Correct)**

B) 20 mm

D) 30 mm

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

A) 75 cm<sup>2</sup>

**B) 80 cm<sup>2</sup>**

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

A) 3740 cm<sup>2</sup>

**C) 3750 cm<sup>2</sup>**

B) 3745 cm<sup>2</sup> (Incorrect)

D) 3755 cm<sup>2</sup>

29. 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

**B) 88 sq.metre (Correct)**

D) 92 sq.metre

30. What is the unit of speed?

**A) Metre/second**

C) Metre/minute (Incorrect)

B)

Metre/second<sup>2</sup>

D) Metre/hour

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

A) Speed

C) Vector quantity (Incorrect)

B) Velocity

**D) Scalar quantity**

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

A) Body at rest

C) Speed (Incorrect)

B) Body at motion

**D) Velocity**

33. 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) 30 km/hour (Incorrect)

C) 34 km/hour

B) 32 km/hour

**D) 36 km/hour**

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

A) 0.40 m/sec<sup>2</sup>

C) 0.20 m/sec<sup>2</sup> (Incorrect)

**B) 0.30**

**m/sec<sup>2</sup>**

D) 0.10 m/sec<sup>2</sup>

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

A) Work

**C) Efficiency (Correct)**

B) Energy

D) Acceleration

36. How many newtons for 1 kilogram?

A) 981 Newtons (Incorrect)

**C) 9.81 Newtons**

B) 98.1 Newtons

D) 0.981 Newtons

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

A) 725.5 watts

**B) 735.5 watts**

C) 745.5 watts

D) 755.5 watts (Incorrect)

38. What is the formula for potential energy?

**A) mgh joule (Correct)**

B)  $mgh^2$  joule

C)  $\frac{1}{2} mgh$  joule

D)  $\frac{2}{3} mgh$  joule

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

A) 72.57 KJ (Incorrect)

**B) 73.57 KJ**

C) 74.57 KJ

D) 75.57 KJ

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

A) 639 Joules

B) 649 Joules

C) 659 Joules (Incorrect)

**D) 669 Joules**

41. What is the square root of 0.017?

A) 0.001

**B) 0.13**

C) 0.00001

D) 0.000001 (Incorrect)

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

A) 4 (Incorrect)

B) 6

**C) 8**

D) 10

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

A) 1.1 metre

B) 1.25 metre

**C) 1.65 metre (Correct)**

D) 1.75 metre

44. 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) 140 rpm

C) 160 rpm

**D) 180 rpm (Correct)**

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

**A) 0.185 (Correct)**

B) 0.175

C) 0.165

D) 0.195

46. How many millimetres are there in 1 inch?

A) 2.54 mm

**B) 25.4 mm**

C) 24.5 mm (Incorrect)

D) 2.45 mm

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

A) 2

**B) 6**

C) 18

D) 24 (Incorrect)

48. Simplify:  $(\frac{3}{4}) + (\frac{2}{5}) - (\frac{5}{20})$

A)  $(\frac{3}{10})$

**B)  $(\frac{9}{10})$**

C)  $(\frac{12}{10})$  (Incorrect)

D)  $(\frac{13}{10})$

49. Divide  $(\frac{20}{31}) / (\frac{15}{62})$

A)  $2(\frac{4}{3})$

B)  $2(\frac{1}{3})$

C)  $2(\frac{3}{2})$  (Incorrect)

**D)  $2(\frac{2}{3})$**

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

A) 13.69

B) 13.79 (Incorrect)

C) 13.89

**D) 13.99**