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Score: 17/50 (34.00%)

Code: 5689

1. Which is the unit of resistance?

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

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

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

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

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

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

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

5. What is the voltage of the immersion heater?

$P = 500 \text{ watts}$

$I = 2.27 \text{ Amps}$

$V = \underline{\hspace{2cm}}$  Volts

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

6. Which law states about electromagnetic induction?

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

7. Which is the example for statically induced emf?

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

8. What is the current Flow in the bulb?

$P = 550 \text{ watts}$

$R = 22 \text{ Ohms}$

$I = \underline{\hspace{2cm}}$  Amps

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- A) 2 Amps (Incorrect)  
 B) 3 Amps  
 C) 4 Amps  
**D) 5 Amps**

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

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

10. 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

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

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

12. What is the volume (V) of mercury in  $\text{cm}^3$ , if mass (m) of mercury is 1 kg and density ( $\rho$ ) is  $13.6 \text{ g/cm}^3$ ?

- A)  $73.53 \text{ cm}^3$**  B)  $73.43 \text{ cm}^3$   
 C)  $73.33 \text{ cm}^3$  (Incorrect) D)  $73.23 \text{ cm}^3$

13. What is the mass in gram, if a force of 15 dynes acting on a mass m producing an acceleration of  $2.5 \text{ cm/sec}^2$ ?

- A) 9 grams  
 B) 8 grams  
 C) 7 grams  
**D) 6 grams (Correct)**

14. What is the volume of mercury in  $\text{cm}^3$ , if the mass (m) of mercury is 136 grams (g) and density ( $\rho$ ) of mercury is  $13.6 \text{ g/cm}^3$ ?

- A)  $136 \text{ cm}^3$   
 B)  $13.6 \text{ cm}^3$   
 C)  $10.6 \text{ cm}^3$  (Incorrect)  
**D)  $10.0 \text{ cm}^3$**

15. 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  
 B) 3.166  
**C) 2.166 (Correct)**  
 D) 1.166

16. Which metal contains iron as a major content?

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

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

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

18. 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

19. Which cast iron cannot be welded?

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

20. Which metal cannot be forged?

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

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

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

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

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

23. 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)

24. 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**

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

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

26. What is the ore of aluminium?

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

27. 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

28. 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>**  
C) 85 cm<sup>2</sup> (Incorrect)                      D) 90 cm<sup>2</sup>

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

- A) 68 mm                                  B) 78 mm (Incorrect)  
C) **88 mm**                                  D) 98 mm

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

- A) 320 mm<sup>2</sup>                                  **B) 330 mm<sup>2</sup>**  
C) 340 mm<sup>2</sup> (Incorrect)                      D) 350 mm<sup>2</sup>

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

- A) 27 cm<sup>2</sup>                                  B) 37 cm<sup>2</sup>  
C) **47 cm<sup>2</sup>**                                  D) 57 cm<sup>2</sup> (Incorrect)

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

- A) 11 m<sup>3</sup>                                  **B) 21 m<sup>3</sup>**  
C) 31 m<sup>3</sup>                                  D) 41 m<sup>3</sup> (Incorrect)

33. What is the formula for velocity?

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

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

- A) Speed                                  B) Velocity (Incorrect)  
C) Vector quantity                      **D) Scalar quantity**

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

- A) Speed (Incorrect)                      B) Velocity  
C) **Vector quantity**                      D) Scalar quantity

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

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

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

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

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

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

39. What is the formula for acceleration?

- A) Metre/second  
C) Metre/minute (Incorrect)
- B) Metre/second<sup>2</sup> (Correct)**  
D) Metre/hour

40. How many newtons for 1 kilogram?

- A) 981 Newtons  
C) **9.81 Newtons**
- B) 98.1 Newtons (Incorrect)  
D) 0.981 Newtons

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

- A) 726 watts  
C) **746 watts**
- B) 736 watts  
D) 756 watts (Incorrect)

42. 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 x 104 kg meter (Incorrect)  
C) 12 x 106 kg meter
- B) 12 x 105 kg meter**  
D) 12 x 107 kg meter

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

- A) 72.57 KJ  
C) 74.57 KJ
- B) 73.57 KJ**  
D) 75.57 KJ (Incorrect)

44. 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  
C) 659 Joules
- B) 649 Joules  
**D) 669 Joules (Correct)**

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

- A) 620 Joules  
C) 630 Joules
- B) 625 Joules**  
D) 635 Joules (Incorrect)

46. What is the square root of 0.017?

- A) 0.001  
C) 0.00001
- B) 0.13 (Correct)**  
D) 0.000001

47. How much is 8% of 40 kg?

- A) 2.2 kg  
C) 4.2 kg (Incorrect)
- B) 3.2 kg**  
D) 5.2 kg

48. What is the percentage of copper if the casting weight of copper 42.3 kg and tin weight 2.7 kg?

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

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

- A) 12  
C) **36**
- B) 18  
D) 42 (Incorrect)

50. What is the square root of 529?

- A) 12  
C) 33
- B) 23**  
D) 43 (Incorrect)