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Question Paper

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Score: 51/55 (92.73%)

Code: 2552

1. Which machine converts mechanical energy into electrical energy?

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

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
C) Ohm (Correct)
B) Volt
D) Watt

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

- A) Voltage
C) Resistance
B) Current (Correct)
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 (Correct)**
C) Wrought iron
B) Cast iron
D) Steel

7. Which is mineral insulator

- A) Glass
C) Mica (Correct)
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 (Correct)
B) 7 ohm
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
B) 2.4 (Correct)
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)**
C) Newton's law
B) Lenz's law
D) Hooke's law

12. What is the resistance?

I = 11.5 Amps

V = 380 Volts

R = _____ Ohms

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

13. What is the formula for induced emf?

- A) $B \frac{dL}{dt} \sin \theta$ volts
C) BLV sin θ volts
B) BL sin θ volts (Incorrect)
D) $B \frac{dV}{dt} \sin \theta$ volts

14. What does EMF stands for?

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

15. Which is the example for statically induced emf?

- A) Generator
C) Transformer (Correct)
B) Motor
D) Refrigerator

16. Which is the example for dynamically induced Emf?

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

17. Which is the unit electrical power?

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

18. 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)

19. What is the power required?

I = 0.455 Amps

R = 484 Ohms

P = ____Watts

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

20. 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 (Correct)
D) 9.8 watts

21. 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 (Correct)
D) 405 volts

22. 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

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

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

24. 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

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

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

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

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

27. What is the density of aluminium?

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

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

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

29. 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
D) 19.5 (Correct)

30. 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
C) 7.2 g/cm³
D) 7.5 g/cm³ (Correct)

31. 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 (Correct)**
B) 73.43 cm³
C) 73.33 cm³
D) 73.23 cm³

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

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

33. 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

34. 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
C) 10.6 cm³
D) 10.0 cm³ (Correct)

35. What is the block weighs (W) in kg, if volume (V) is 320

cm³ and density 8.9 g/cm³?

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

36. 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
C) **2.166 (Correct)**
B) 3.166
D) 1.166

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

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

38. Which one is non-metal?

- A) Mercury
C) Brass
B) Graphite (Correct)
D) Iron

39. Which metal contains iron as a major content?

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

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

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

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

- A) Fusibility
C) Corrosion
B) Ductility (Correct)
D) Structure

42. Which is brittle metal?

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

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

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

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

- A) Elasticity
C) Ductility
B) Plasticity (Correct)
D) Brittleness

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

- A) Malleability
C) **Elasticity (Correct)**
B) Tenacity
D) Plasticity

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

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

47. Which alloy used in electric lamp as filament?

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

48. What metals contained in brass alloy?

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

49. Which cast iron cannot be welded?

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

50. Which metal cannot be forged?

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

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

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

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

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

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

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

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

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

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

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