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Question Paper

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Score: 37/55 (67.27%)

Code: 7903

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**
C) Ohm (Incorrect)
B) Volt
D) Watt

3. Which is the unit of resistance?

- A) Ampere
C) Ohm
B) Volt (Incorrect)
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 (Incorrect)
C) 17 ohms
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**
B) Voltage (Incorrect)

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) $B \times 2 \times L \sin \theta$ volts
C) BLV sin θ volts
B) BL sin θ volts (Incorrect)
D) $B \times 2 \times V \sin \theta$ volts

14. What does EMF stand 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 (Incorrect)
B) 9.4 watts
C) 9.6 watts
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
C) Volume
D) Density (Incorrect)

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

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

26. 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

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 (Incorrect)
D) 7.5 g/cm³

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**
D) Iron (Incorrect)

39. Which metal contains iron as a major content?

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

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 (Incorrect)
B) **Ductility**
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 (Incorrect)
D) **Cast iron**

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

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

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

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

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

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