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Score: 63/78 (80.77%)

Code: 9608

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?

$I = 11.5 \text{ Amps}$
 $V = 380 \text{ Volts}$
 $R = \text{_____ Ohms}$

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

13. What is the current?

$R = 50 \text{ Ohms}$
 220 Volts
 $I = \text{_____ Amps}$

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

14. What is the voltage?

$R = 250 \text{ Ohms}$
 $I = 0.44 \text{ Amps}$
 $V = \text{_____ Volts}$

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

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

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

17. How much watt second in 1 watt hour?

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

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

- 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 **B) $I^2 R$ watts**
C) RI (Incorrect) D) IR^2

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 B) 95.8 ohms
C) 96.8 ohms (Correct) 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 B) 210.3 volts
C) 220.3 volts D) 230.3 volts (Incorrect)

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

25. What is the formula for induced emf?

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

26. What does EMF stands for?

- A) Electronic Magnetic Force **B) Electro Motive Force (Correct)**
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 dynamically induced Emf?

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

29. Which is the unit electrical power?

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

30. What is the current Flow in the bulb?

$P = 550$ watts

$R = 22$ Ohms

$I =$ _____ Amps

$I =$ _____ Amps

$R = 22$ Ohms

$I =$ _____ Amps

A) 2 Amps

B) 3 Amps

C) 4 Amps

D) 5 Amps (Correct)

31. What is the power required?

$I = 0.455$ Amps

$R = 484$ Ohms

$P =$ _____ Watts

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$P =$ _____ Watts

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

B) 9.4 watts

C) 9.6 watts (Correct)

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

B) 395 volts

C) 400 volts (Correct)

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

$t =$ _____ Hours

$t =$ _____ Hours

$t =$ _____ Hours

$t =$ _____ Hours

$t =$ _____ Hours

$t =$ _____ Hours

$t =$ _____ Hours

B) 12 hours

A) 10 hours (Correct)

C) 18 hours

D) 24 hours

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

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

36. 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

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

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

38. 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

39. 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

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

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

41. What is the specific gravity of the solid, if density of the solid is 19.5 g/cm³?

- A) 8
B) 18.5
D) 19.5 (Correct)
C) 19

42. 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 (Incorrect)
C) 7.2 g/cm³
D) 7.5 g/cm³ (Correct)

43. 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 (Incorrect)
D) 73.23 cm³

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

- A) 9 grams
B) 8 grams (Incorrect)
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**
B) 10
C) 15
D) 25 (Incorrect)

46. 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 (Incorrect)
B) 13.6 cm³
C) 10.6 cm³
D) 10.0 cm³ (Correct)

47. What is the block weighs (W) in kg, if volume (V) is 320 cm³ and density 8.9 g/cm³?

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

48. What is the specific gravity of the metal, if it 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 = 9.81 m/sec²)

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

50. What is the square root of 0.017?

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

51. What is the definition of ratio?

- A) Relation of two quantities of the same kind (Correct)**
B) Relation of two quantities of the different kind
C) Equality between two ratios
D) Inequality between two ratios

52. What is the ratio of 4 kg to 800 grams?

- A) 05:01 (Correct)**
B) 04:08
C) 08:04
D) 02:04

53. What percentage of 80 is 20?

- A) 0.8
B) 0.4
C) 0.25 (Correct)
D) 0.2

54. How much is 8% of 40 kg?

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

55. Convert 52% into fraction?

- A) (9/25)
C) (13/25) (Correct)
- B) (11/25)
D) (17/25)

56. Convert 0.456 decimal fraction into percentage?

- A) 0.456
C) 45.6 (Correct)
- B) 0.0456
D) 0.000456

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

- A) 4 (Incorrect)
C) 8
- B) 6
D) 10

58. What is the square root of decimal number 550.37?

- A) 21.26
C) 22.46
- B) 22.26
D) 23.46 (Correct)

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

- A) 1.1 metre
C) 1.65 metre
- B) 1.25 metre
D) 1.75 metre (Incorrect)

60. How many days a mechanic takes to assemble 64 machines if he assembles 8 machines in 3 days?

- A) 20 days
C) 24 days (Correct)
- B) 22 days
D) 26 days

61. 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
C) 160 rpm
- B) 140 rpm
D) 180 rpm (Correct)

62. 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%**
D) Cu 98% (Incorrect)

63. A motor cycle tyre is sold for Rs 300/- what is the purchase price if 25% profit is added to it.

- A) Rs 200
C) Rs 240 (Correct)
- B) Rs 220
D) Rs 260

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

- A) 0.185 (Correct)**
C) 0.165
- B) 0.175
D) 0.195

65. What are the two classifications of system of units?

- A) British and Metric
C) Fundamental and derived (Correct)
- B) Gravitational and non-gravitational
D) Metric and International

66. What are fundamental units?

- A) Length, Mass, Volume
C) Length, Mass, Area
- B) Length, Mass, Time (Correct)**
D) Length, Pressure, Volume

67. What denotes letter M in MKS system?

- A) Mile
C) Millimeter
- B) Meter (Correct)**
D) Micron

68. How many millimetres are there in 1 inch?

- A) 2.54 mm
C) 24.5 mm
- B) 25.4 mm (Correct)**
D) 2.45 mm

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

- A) 12
C) 36 (Correct)
- B) 18
D) 42

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

- A) 2
C) 18
- B) 6 (Correct)**
D) 24

71. What is the improper fraction for the given mixed fraction ? $7 \frac{3}{7}$

- A) (52/7) (Correct)**
C) "28/7"
- B) "7/52"
D) "7/28"

72. Convert decimal 0.000659 to fraction?

- A) (659/1000)
C) (659/100000)
- B) (659/10000)
D) (659/1000000) (Correct)

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

- A) (3/10)
C) (12/10)
- B) (9/10) (Correct)**
D) (13/10)

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

- A) $2\frac{4}{3}$
C) $2\frac{3}{2}$
- B) $2\frac{1}{3}$
D) $2\frac{2}{3}$ (Correct)

75. What is the product of 0.003×0.5 ?

- A) 0.00015
C) 0.015
- B) 0.0015 (Correct)**
D) 0.15

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

A) 13.69

B) 13.79

C) 0.28 metre

D) 0.29 metre

C) 13.89

D) 13.99 (Correct)

77. What is the length of each part is a copper wire of 225 metre long is cut into 900 equal parts?

A) 0.23 metre

B) 0.25 metre (Correct)

78. What is the square root of 529?

A) 12

B) 23 (Correct)

C) 33

D) 43
