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Score: 40/63 (63.49%)

Code: 5379

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
B) Voltage
D) EMF (Incorrect)

6. Which is very good conductor?

- A) Copper (Correct)
C) Wrought iron
B) Cast iron
D) Steel

7. Which is mineral insulator

- A) Glass (Incorrect)
C) Mica
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 (Correct)
C) 3 W
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 1ampere?

- A) 1 watt** B) 1 kilowatt
C) 1 HP (Incorrect) 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) IRA

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 (Incorrect) B) 95.8 ohms
C) 96.8 ohms D) 97.8 ohms

22. What is the voltage of the immersion heater?

$P = 500$ watts

$I = 2.27$ Amps

$V = \underline{\hspace{1cm}}$ Volts

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

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

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

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 formual for induced emf?

- A) $B^2 L \sin \theta$ volts B) $BL \sin \theta$ volts
C) $BLV \sin \theta$ volts (Correct) D) $B^2 L \sin \theta$ 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 dynamicallly induced Emf?

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

29. Which is the unit electrical power?

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

30. What is the current Flow in the bulb?

$P = 550$ watts

$R = 22$ Ohms

$I = \underline{\hspace{1cm}}$ Amps

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

31. What is the power required?

$I = 0.455$ Amps

$R = 484$ Ohms

$P = \underline{\hspace{1cm}}$ Watts

- A) 98.2 watts B) 99.2 watts
C) 100.2 watts (Correct) 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 (Incorrect) B) 395 volts
C) 400 volts 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

$t = \underline{\hspace{1cm}}$ Hours

- A) 10 hours** B) 12 hours
C) 18 hours D) 24 hours (Incorrect)

35. What is the square root of 0.017?

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

36. What is the definition of ratio?

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

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

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

38. What percentage of 80 is 20?

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

39. How much is 8% of 40 kg?

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

40. Convert 52% into fraction?

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

41. Convert 0.456 decimal fraction into percentage?

- A) 0.456
C) **45.6**
B) 0.0456
D) 0.000456 (Incorrect)

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

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

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

- A) 21.26 (Incorrect)
C) 22.46
B) 22.26
D) **23.46**

44. 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 (Incorrect)
D) 1.75 metre

45. 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

46. 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)**

47. 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%

48. 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**
B) Rs 220
D) Rs 260 (Incorrect)

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

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

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

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

51. What are fundamental units?

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

52. What denotes letter M in MKS system?

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

53. 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

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

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

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

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

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

- A) **(52/7) (Correct)**
B) "7/52"

C) "28/7"

D) "7/28"

A) 0.00015

B) 0.0015 (Correct)

C) 0.015

D) 0.15

57. Convert decimal 0.000659 to fraction?

A) (659/1000)

B) (659/10000)

C) (659/100000)

D) (659/1000000) (Correct)

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

A) 13.69

B) 13.79 (Incorrect)

C) 13.89

D) 13.99

58. Simplify: $(3/4) + (2/5) - (5/20)$

A) (3/10)

B) (9/10)

C) (12/10) (Incorrect)

D) (13/10)

62. 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 (Incorrect)

B) 0.25 metre

C) 0.28 metre

D) 0.29 metre

59. Divide $(20/31) / (15/62)$

A) $2(4/3)$

B) $2(1/3)$

C) $2(3/2)$

D) $2(2/3)$ (Correct)

63. What is the square root of 529?

A) 12

B) 23 (Correct)

C) 33

D) 43

60. What is the product of 0.003×0.5 ?