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Score: 57/90 (63.33%)

Code: 0259

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**
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
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**
C) Newton's law (Incorrect)
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 (Incorrect)
C) **33 ohms**
B) 23 ohms
D) 43 ohms

13. What is the current?

R = 50 Ohms

220 Volts

I = _____ Amps

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

14. What is the voltage?

R = 250 Ohms

I = 0.44 Amps

V = _____ Volts

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

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 (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 D) IRA (Incorrect)

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 (Incorrect)
C) **220.3 volts** D) 230.3 volts

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 formual for induced emf?

- A) $B^2 L \sin q$ volts B) $BL \sin q$ volts (Incorrect)
C) **$BLV \sin q$ volts** D) $B^2 V \sin q$ volts

26. What does EMF stands for?

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

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 (Correct)**
C) Car D) Motor bike

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

$I =$ _____ 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

- A) 98.2 watts B) 99.2 watts (Incorrect)
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** D) 9.8 watts (Incorrect)

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

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

35. Which one is non-metal?

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

36. Which metal contains iron as a major content?

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

37. 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

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

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

39. Which is brittle metal?

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

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

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

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

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

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

- A) Malleability (Incorrect)
C) Elasticity
B) Tenacity
D) Plasticity

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

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

44. Which alloy used in electric lamp as filament?

- A) Cobalt (Incorrect)
C) Tungsten
B) Vanadium
D) Silicon

45. What metals contained in brass alloy?

- A) Copper and aluminium (Incorrect)
B) Copper and lead

C) Copper and zinc

D) Copper and tin

46. Which cast iron cannot be welded?

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

47. Which metal cannot be forged?

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

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

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

49. 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

50. 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

51. 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)

52. What is the ore of aluminium?

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

53. Which property of a metal enables it by which it can be drawn out into wires under tension without rupture?

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

54. Which among the following is an insulator?

- A) Copper (Incorrect)
C) Silver
B) Aluminium
D) Mica

55. Which rubber is used as insulator for power cables and control wires?

- A) Butyl
C) Silicon (Correct)
B) Hypalone
D) Nitrite butadiene

56. Which alloy steel is used to make permanent magnets?

- A) Silicon steel
C) Vanadium steel
B) Manganese steel
D) Cobalt steel (Correct)

57. Which insulator is used in over head lines?

- A) Mica
C) P.V.C (Incorrect)
B) Rubber
D) **Porcelain**

58. Which insulating material is used for making switches?

- A) Porcelain
C) **Bakelite (Correct)**
B) PVC
D) Ebonite

59. What is the name of the property of an insulation that should brake down or puncture on application of high voltage?

- A) **Di-electric strength (Correct)**
C) Mechanical strenth
B) Specific resistance
D) Non absorption

60. Which alloy steel is using for making precious instrument?

- A) Silicon steel
C) **Invar steel (Correct)**
B) Manganese steel
D) Vanadium

61. Which steel is used for making files and cold chisel?

- A) Low carbon steel
C) **High carbon steel (Correct)**
B) Midium carbon steel
D) Stainless steel

62. What is the square root of 0.017?

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

63. What is the definition of ratio?

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

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

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

65. What percentage of 80 is 20?

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

66. How much is 8% of 40 kg?

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

67. Convert 52% into fraction?

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

68. Convert 0.456 decimal fraction into percentage?

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

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

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

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

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

71. 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 (Correct)**
B) 1.25 metre
D) 1.75 metre

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

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

73. 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)**

74. 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%

75. 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

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

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

77. 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

78. What are fundamental units?

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

79. What denotes letter M in MKS system?

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

80. 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

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

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

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

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

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

- A) $\frac{52}{7}$ (Correct)**
C) $\frac{28}{7}$
- B) $\frac{7}{52}$
D) $\frac{7}{28}$

84. Convert decimal 0.000659 to fraction?

- A) $\frac{659}{1000}$ (Incorrect)
C) $\frac{659}{100000}$
- B) $\frac{659}{10000}$
D) $\frac{659}{1000000}$

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

- A) $\frac{3}{10}$
C) $\frac{12}{10}$
- B) $\frac{9}{10}$ (Correct)**
D) $\frac{13}{10}$

86. 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)

87. What is the product of 0.003×0.5 ?

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

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

- A) 13.69
C) 13.89
- B) 13.79 (Incorrect)
D) 13.99

89. 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
C) 0.28 metre
- B) 0.25 metre (Correct)**
D) 0.29 metre

90. What is the square root of 529?

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