

Duration: 90 Mins

Total Marks: 95

Q.ID: ITISKILL10543Z

1. What is the total resistance if three resistances of 3 ohms, 9 ohms and 5 ohms are connected in series?

- A) 1/17 ohms B) 11 ohms
C) 17 ohms D) 7 ohm

Answer: C) 17 ohms

2. Which is mineral insulator

- A) Quartz B) Porcelain
C) Glass D) Mica

Answer: D) Mica

3. What is the total resistance if two resistances of 4 ohms and 6 ohms are connected in parallel?

- A) 4 B) 5
C) 2.4 D) 10

Answer: C) 2.4

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

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

Answer: D) Grey cast iron

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

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

Answer: B) Density

6. Which insulator is used in over head lines?

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

Answer: A) Porcelain

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

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

Answer: A) Cupola

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

- A) wb/m B) m/wb
C) Hertz D) Coloumb

Answer: A) wb/m

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

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

Answer: B) 1.65 metre

10. What is the current? $R = 50 \text{ Ohms}$ $V = 220 \text{ Volts}$
 $I = \text{_____Amps}$

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

Answer: B) 4.4 Amps

11. What is the current Flow in the bulb? $P = 550 \text{ watts}$
 $R = 22 \text{ Ohms}$ $I = \text{_____Amps}$

- A) 4 Amps B) 3 Amps
C) 5 Amps D) 2 Amps

Answer: C) 5 Amps

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

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

Answer: A) Fusibility

13. How many millimetres are there in 1 inch?

- A) 2.45 mm B) 24.5 mm
C) 25.4 mm D) 2.54 mm

Answer: C) 25.4 mm

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

- A) Power B) Voltage
C) Resistance D) Current

Answer: D) Current

15. Which metal cannot be forged?

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

Answer: C) Cast iron

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

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

Answer: A) Fundamental and derived

17. What is the voltage of the immersion heater? $P = 500 \text{ watts}$ $I = 2.27 \text{ Amps}$ $V = \text{_____Volts}$

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

Answer: A) 220.3 volts

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

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

Answer: A) 23.46

19. What is the density of aluminium?

- A) 5.7 g/cm^3 B) 2.7 g/cm^3
C) 3.7 g/cm^3 D) 4.7 g/cm^3

Answer: B) 2.7 g/cm^3

20. Which is the unit of current?

- A) Ohm B) Ampere
C) Watt D) Volt

Answer: B) Ampere

21. What is the force with which a body is attracted by the earth towards its centre?

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

Answer: B) Weight

22. What are fundamental units?

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

Answer: B) Length, Mass, Time

23. What is the density (ρ) in g/cm^3 of an iron cube, if it weighs (W) 4.8 kg and volume (V) is 640 cm^3 ?

- A) 6.6 g/cm^3 B) 7.2 g/cm^3
C) 6.9 g/cm^3 D) 7.5 g/cm^3

Answer: D) 7.5 g/cm^3

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

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

Answer: B) Cobalt steel

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

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

Answer: A) 24 days

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

- A) Stainless steel B) Low carbon steel
C) Medium carbon steel D) High carbon steel

Answer: D) High carbon steel

27. How much power does it consumes if an electric heater draws a current of 10 amps at 200 volts?

- A) 2020 watts B) 2000 watts
C) 2030 watts D) 2010 watts

Answer: B) 2000 watts

28. What is the filament resistance if a 6 volt bulb draws a current of 0.5 Amps?

- A) 12 W B) 1.2 W
C) 10 W D) 3 W

Answer: A) 12 W

29. What is the specific gravity of the solid, if density of the solid is 19.5 g/cm^3 ?

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

Answer: A) 19.5

30. How many hours will take for a 100 watts bulb to consume 1 kwh energy? $W = 1 \text{ Kwh}$ $P = 100 \text{ Watts}$ $t = \text{_____Hours}$

- A) 12 hours B) 18 hours
C) 10 hours D) 24 hours

Answer: C) 10 hours

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

- A) 0.175 B) 0.165
C) 0.185 D) 0.195

Answer: C) 0.185

32. Which insulating material is used for making switches?

- A) Bakelite B) Ebonite
C) Porcelain D) PVC

Answer: A) Bakelite

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

- A) Specific gravity B) Weight
C) Mass D) Density

Answer: A) Specific gravity

34. Which rubber is used as insulator for power cables and

control wires?

- A) Butyl
- B) Nitrite butadiene
- C) Silicon
- D) Hypalane

Answer: C) Silicon

35. How much voltage will be required to illuminate a 40 watts fluorescent lamp draws a current of 0.10 amperes?

- A) 390 volts
- B) 400 volts
- C) 395 volts
- D) 405 volts

Answer: B) 400 volts

36. What is the resistance of an electric iron if the rating of electric iron is 220 V and 500 watts?

- A) 97.8 ohms
- B) 96.8 ohms
- C) 95.8 ohms
- D) 94.8 ohms

Answer: B) 96.8 ohms

37. Which is equal to electric power?

- A) IRA
- B) I^2R watts
- C) RI
- D) R^2I watts

Answer: B) I^2R watts

38. What is the specific gravity of the metal, if the piece of metal weighs 150 grams in air and 125 grams in water?

- A) 15
- B) 6
- C) 10
- D) 25

Answer: B) 6

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

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

Answer: C) Di-electric strength

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

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

Answer: A) 36

41. Which is brittle metal?

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

Answer: A) Cast iron

42. Which among the following is an insulator?

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

Answer: D) Mica

43. What is the diagonal of a square plate whose side is 28

cm?

- A) 39.39 cm
- B) 39.49 cm
- C) 39.59 cm
- D) 39.29 cm

Answer: C) 39.59 cm

44. What is the carbon percentage in high carbon steel?

- A) 0.25% to 0.50%
- B) 0.02% to 0.03%
- C) 0.15% to 0.25%
- D) 0.50% to 1.50%

Answer: D) 0.50% to 1.50%

45. Which metal contains iron as a major content?

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

Answer: C) Ferrous metal

46. Which machine converts mechanical energy into electrical energy?

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

Answer: D) Generator

47. How much watt second in 1 watt hour?

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

Answer: D) 3600 watt sec

48. What is the volume of mercury in cm^3 , if the mass (m) of mercury is 136 grams (g) and density (r) of mercury is 13.6 g/cm^3 ?

- A) 13.6 cm^3
- B) 136 cm^3
- C) 10.6 cm^3
- D) 10.0 cm^3

Answer: D) 10.0 cm^3

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

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

Answer: D) Ductility

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

- A) Hardness
- B) Brittleness
- C) Malleability
- D) Ductility

Answer: D) Ductility

51. Which property of a substance is opposing the flow of electric current?

- A) Resistance
- B) Current
- C) EMF
- D) Voltage

Answer: A) Resistance

52. Which law states about electromagnetic induction?

- A) Hooke's law
- B) Ohm's law
- C) Faraday's law
- D) Lenz's law

Answer: C) Faraday's law

53. Which is the example for statically induced emf?

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

Answer: A) Transformer

54. Which one is non-metal?

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

Answer: A) Graphite

55. What is the specific gravity of the metal, if the weighs 6.5 kgf in air and 3.5 kgf in water?

- A) 1.166
- B) 3.166
- C) 6.166
- D) 2.166

Answer: D) 2.166

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

- A) Manganese steel
- B) Silicon steel
- C) Vanadium
- D) Invar steel

Answer: D) Invar steel

57. What is the mass in gram, if a force of 15 dynes acting on a mass m producing an acceleration of 2.5 cm/sec^2 ?

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

Answer: D) 6 grams

58. Convert 0.456 decimal fraction into percentage?

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

Answer: A) 45.6

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

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

Answer: C) Mass

60. Which is the unit electrical power?

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

Answer: C) Watts

61. What is the rated power if an adjustable resistor bears the

following label $1.5 \text{ k ohms} / 0.08 \text{ A}$?

- A) 9.4 watts
- B) 9.2 watts
- C) 9.8 watts
- D) 9.6 watts

Answer: D) 9.6 watts

62. 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) Lenz's law
- B) Newton's law
- C) Ohm's law
- D) Hooke's law

Answer: C) Ohm's law

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
- B) Rs 260
- C) Rs 240
- D) Rs 220

Answer: C) Rs 240

64. What metals contained in brass alloy?

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

Answer: B) Copper and zinc

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

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

Answer: D) Plasticity

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

- A) $I = V/R$
- B) $I = R$
- C) $I = 1/V$
- D) $I = R/V$

Answer: A) $I = V/R$

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

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

Answer: D) Elasticity

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

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

Answer: D) 8

69. What denotes letter M in MKS system?

- A) Meter
- B) Mile
- C) Millimeter
- D) Micron

Answer: A) Meter

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

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

Answer: B) Mild steel

71. Which cast iron cannot be welded?

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

Answer: C) White cast iron

72. Which is the unit of resistance?

- A) Ampere
- B) Ohm
- C) Watt
- D) Volt

Answer: B) Ohm

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

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

Answer: C) 2.848 kg

74. What does EMF stands for?

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

Answer: B) Electro Motive Force

75. What is the power required? $I = 0.455$ Amps $R = 484$ Ohms $P = \underline{\hspace{1cm}}$ Watts

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

Answer: C) 100.2 watts

76. 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) 73.23 cm³
- B) 73.43 cm³
- C) 73.33 cm³
- D) 73.53 cm³

Answer: D) 73.53 cm³

77. What is the ore of aluminium?

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

Answer: B) Bauxite

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

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

Answer: C) 0.25% to 0.5%

79. What is the voltage? $R = 250$ Ohms $I = 0.44$ Amps $V = \underline{\hspace{1cm}}$ Volts

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

Answer: D) 110 Volts

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

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

Answer: C) Non-ferrous metals

81. What is the area of a square whose side is 18 cm?

- A) 324 cm²
- B) 72 cm²
- C) 36 cm²
- D) 26 cm²

Answer: A) 324 cm²

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

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

Answer: A) Blast furnace

83. 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
- B) 140 rpm
- C) 160 rpm
- D) 180 rpm

Answer: D) 180 rpm

84. What is the carbon percentage in low carbon steel?

- A) 0.02% to 0.03%
- B) 0.15% to 0.25%
- C) 0.50% to 1.50%
- D) 0.25% to 0.50%

Answer: B) 0.15% to 0.25%

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

- A) 1 HP
- B) 1 kilowatt
- C) 1 Kilowatt hour
- D) 1 watt

Answer: D) 1 watt

86. What is the resistance? $I = 11.5$ Amps $V = 380$ Volts $R = \underline{\hspace{1cm}}$ Ohms

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

Answer: C) 33 ohms

87. Which is the example for dynamically induced Emf?

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

Answer: A) Generator

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

A) Hardness

B) Toughness

C) Ductility

D) Malleability

Answer: A) Hardness

89. Which is very good conductor?

A) Wrought iron

B) Cast iron

C) Copper

D) Steel

Answer: C) Copper

90. What is the weight force of a car has a mass of 800 kg?(Take $g = 9.81\text{m/sec}$)

A) 7487 Newton

B) 7847 Newton

C) 7848 Newton

D) 7748 Newton

Answer: C) 7848 Newton

91. Which alloy used in electric lamp as filament?

A) Vanadium

B) Tungsten

C) Cobalt

D) Silicon

Answer: B) Tungsten

92. What is the mass if the density of a body is 7.6 g/cm^3 and its volume is 25 cm^3 ?

A) 210 grams

B) 220 grams

C) 190 grams

D) 200 grams

Answer: C) 190 grams

93. What is the percentage of copper if the casting weight of copper 42.3 kg and tin weight 2.7 kg?

A) Cu 92%

B) Cu 96%

C) Cu 94%

D) Cu 98%

Answer: C) Cu 94%

94. What is the formula for induced emf?

A) $B^2 L \sin \theta$ volts

B) $BLV \sin \theta$ volts

C) $B^2 L^2 V \sin \theta$ volts

D) $BL \sin \theta$ volts

Answer: B) $BLV \sin \theta$ volts

95. Which is same in series connection of resistors in a circuit?

A) Voltage

B) Current

C) Power

D) Resistance

Answer: B) Current