

Duration: 120 Mins

Total Marks: 78

Q.ID: ITISKILL33244K

1. 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) 10.0 cm³
 C) 10.6 cm³ D) 13.6 cm³

Answer: B) 10.0 cm³

2. Which is mineral insulator

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

Answer: A) Mica

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

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

Answer: A) Specific gravity

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

- A) 24 B) 6
 C) 2 D) 18

Answer: B) 6

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

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

Answer: D) Resistance

6. Convert decimal 0.000659 to fraction?

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

Answer: C) (659/1000000)

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

- A) 200 grams B) 210 grams
 C) 220 grams D) 190 grams

Answer: D) 190 grams

8. What are fundamental units?

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

Answer: A) Length, Mass, Time

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

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

Answer: B) 2000 watts

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

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

Answer: C) 8

11. 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) 7.2 g/cm³ B) 6.6 g/cm³
 C) 6.9 g/cm³ D) 7.5 g/cm³

Answer: D) 7.5 g/cm³

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

- A) Cu 96% B) Cu 98%
 C) Cu 92% D) Cu 94%

Answer: D) Cu 94%

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

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

Answer: A) 23.46

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

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

Answer: C) $(\frac{9}{10})$

15. What is the rated power if an adjustable resistor bears the following label 1.5 k ohms/ 0.08A?

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

Answer: D) 9.6 watts

16. What is the voltage of the immersion heater? $P = 500$ watts $I = 2.27$ Amps $V =$ _____Volts

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

Answer: D) 220.3 volts

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

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

Answer: C) Weight

18. What is the square root of 529?

- A) 33
C) 23
- B) 12
D) 43

Answer: C) 23

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

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

Answer: C) 13.99

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

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

Answer: B) Current

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

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

Answer: C) 2.4

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

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

Answer: B) 19.5

23. What is the formula for induced emf?

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

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

24. How much watt second in 1 watt hour?

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

Answer: C) 3600 watt sec

25. Convert 0.456 decimal fraction into percentage?

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

Answer: A) 45.6

26. What is the current flow in the bulb? $P = 550 \text{ watts}$
 $R = 22 \text{ Ohms}$ $I = \text{_____ Amps}$

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

Answer: C) 5 Amps

27. What is the length L_2 , if total length (L) is 2.75 metre and $L_1:L_2 = 2:3$?

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

Answer: D) 1.65 metre

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

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

Answer: A) $I = V/R$

29. What is the length of each part if 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
D) 0.29 metre

Answer: B) 0.25 metre

30. 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) 6 grams
C) 7 grams
- B) 8 grams
D) 9 grams

Answer: A) 6 grams

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

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

Answer: B) 96.8 ohms

32. Which is the example for statically induced emf?

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

Answer: B) Transformer

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

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

Answer: D) 400 volts

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

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

Answer: C) 2.848 kg

35. What is the weight force of a car has a mass of 800 kg?(Take g = 9.81m/sec)

- A) 7487 Newton B) 7847 Newton
C) 7748 Newton D) 7848 Newton

Answer: D) 7848 Newton

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

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

Answer: A) 17 ohms

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

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

Answer: D) Fundamental and derived

38. Which is the example for dynamically induced Emf?

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

Answer: D) Generator

39. What is the square root of 0.017?

- A) 0.000001 B) 0.13
C) 0.00001 D) 0.001

Answer: B) 0.13

40. Which is equal to electric power?

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

Answer: D) $I^2 R$ watts

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

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

Answer: A) Density

42. 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) 18 hours B) 10 hours
C) 12 hours D) 24 hours

Answer: B) 10 hours

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

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

Answer: B) 05:01

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

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

Answer: B) Rs 240

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

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

Answer: B) 12 W

46. What is the definition of ratio?

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

Answer: A) Relation of two quantities of the same kind

47. What is the resistance? $I = 11.5 \text{ Amps}$ $V = 380 \text{ Volts}$ $R = \text{ ___ Ohms}$

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

Answer: C) 33 ohms

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

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

Answer: C) 36

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

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

Answer: C) wb/m

50. Convert 52% into fraction?

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

Answer: D) (13/25)

51. What is the product of 0.003 x 0.5?

- A) 0.0015 B) 0.015
C) 0.15 D) 0.00015

Answer: A) 0.0015

52. What is the power required? $I = 0.455 \text{ Amps}$ $R =$

= 484 Ohms
 P = ____Watts

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

Answer: D) 100.2 watts

53. Which is the unit of resistance?

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

Answer: A) Ohm

54. How much is 8% of 40 kg?

- A) 5.2 kg B) 3.2 kg
C) 4.2 kg D) 2.2 kg

Answer: B) 3.2 kg

55. 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) 73.43 cm³ B) 73.53 cm³
C) 73.33 cm³ D) 73.23 cm³

Answer: B) 73.53 cm³

56. Which machine converts mechanical energy into electrical energy?

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

Answer: A) Generator

57. What denotes letter M in MKS system?

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

Answer: B) Meter

58. What is the current?
 R = 50 Ohms
 220 Volts

 I = ____Amps

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

Answer: C) 4.4 Amps

59. 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) 140 rpm B) 160 rpm
C) 180 rpm D) 120 rpm

Answer: C) 180 rpm

60. Which is the unit electrical power?

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

Answer: A) Watts

61. Which is the unit of current?

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

Answer: B) Ampere

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

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

Answer: C) 24 days

63. What is the density of aluminium?

- A) 2.7 g/cm³ B) 4.7 g/cm³
C) 3.7 g/cm³ D) 5.7 g/cm³

Answer: A) 2.7 g/cm³

64. 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) 10
C) 25 D) 6

Answer: D) 6

65. What percentage of 80 is 20?

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

Answer: A) 0.25

66. How many millimetres are there in 1 inch?

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

Answer: C) 25.4 mm

67. 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 B) Newton's law
C) Lenz's law D) Hooke's law

Answer: A) Ohm's law

68. What is the voltage?
 R = 250 Ohms
 I = 0.44 Amps
 V = ____Volts

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

Answer: A) 110 Volts

69. What is the improper fraction for the given mixed fraction ? 7 x (3/7)

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

Answer: A) (52/7)

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

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

Answer: C) Current

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

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

Answer: B) Mass

72. 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) 2.166
- D) 6.166

Answer: C) 2.166

73. What does EMF stands for?

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

Answer: C) Electro Motive Force

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

- A) 0.165
- B) 0.175

- C) 0.185
- D) 0.195

Answer: C) 0.185

75. Which is very good conductor?

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

Answer: D) Copper

76. Which law states about electromagnetic induction?

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

Answer: A) Faraday's law

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

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

Answer: A) 1 watt

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

- A) $2(4/3)$
- B) $2(2/3)$
- C) $2(3/2)$
- D) $2(1/3)$

Answer: B) $2(2/3)$
