

Duration: 30 Mins

Total Marks: 50

Q.ID: ITISKILL9070P2

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

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

Answer: B) Fusibility

2. What is the ratio of power output to power input?

- A) Acceleration B) Work
C) Energy D) Efficiency

Answer: D) Efficiency

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

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

Answer: D) 1.65 metre

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

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

Answer: B) 6

5. What is the diagonal of a square plate whose side is 28 cm?

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

Answer: C) 39.59 cm

6. Find the total surface area of cube whose side is 25 cm.

- A) 3745 cm^2 B) 3740 cm^2
C) 3755 cm^2 D) 3750 cm^2

Answer: D) 3750 cm^2

7. Which is mineral insulator

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

Answer: D) Mica

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

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

Answer: D) 33 ohms

9. What is the potential energy, if a body of mass 250 kg is at a height of 30 metre?

- A) 75.57 KJ B) 73.57 KJ
C) 74.57 KJ D) 72.57 KJ

Answer: B) 73.57 KJ

10. What is the square root of 0.017?

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

Answer: A) 0.13

11. What is the rate of change of displacement of a body?

- A) Body at motion B) Velocity
C) Speed D) Body at rest

Answer: B) Velocity

12. How many millimetres are there in 1 inch?

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

Answer: A) 25.4 mm

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

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

Answer: A) 96.8 ohms

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

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

Answer: A) 13.99

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

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

Answer: A) 17 ohms

16. Which one is non-metal?

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

Answer: D) Graphite

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

control wires?

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

Answer: B) Silicon

18. What is the speed of a train of 80 metre long train passes a railway station platform of 120 metres length in 20 seconds?

- A) 32 km/hour
C) 34 km/hour
B) 30 km/hour
D) 36 km/hour

Answer: D) 36 km/hour

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

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

Answer: B) 0.185

20. What is the unit of speed?

- A) Metre/minute
C) Metre/hour
B) Metre/second²
D) Metre/second

Answer: D) Metre/second

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

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

Answer: B) Weight

22. Which machine converts mechanical energy into electrical energy?

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

Answer: A) Generator

23. What is the total surface area of a cylinder having radius 2 metres and height 5 metres?

- A) 88 sq.metre
C) 90 sq.metre
B) 86 sq.metre
D) 92 sq.metre

Answer: A) 88 sq.metre

24. What is the work done in joules if a load of 15.5 kg is lifted through a height of 4.4 metres?

- A) 659 Joules
C) 669 Joules
B) 649 Joules
D) 639 Joules

Answer: C) 669 Joules

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

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

Answer: D) 1 watt

26. What is the side of a square whose area is 625 mm²?

- A) 30 mm
C) 25 mm
B) 15 mm
D) 20 mm

Answer: C) 25 mm

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

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

Answer: A) 190 grams

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

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

Answer: B) 0.50% to 1.50%

29. Which is brittle metal?

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

Answer: A) Cast iron

30. What is the formula for potential energy?

- A) $\frac{2}{3} mgh$ joule
C) $\frac{1}{2} mgh$ joule
B) mgh^2 joule
D) mgh joule

Answer: D) mgh joule

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

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

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

32. What is the retardation of a car moving with a velocity of 50 km/hr is brought to rest in 45 seconds?

- A) 0.20 m/sec²
C) 0.10 m/sec²
B) 0.40 m/sec²
D) 0.30 m/sec²

Answer: D) 0.30 m/sec²

33. What is called if a body possesses only magnitude or size alone?

- A) Vector quantity
C) Velocity
B) Speed
D) Scalar quantity

Answer: D) Scalar quantity

34. Which insulator is used in overhead lines?

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

Answer: C) Porcelain

35. What is the specific gravity of the metal, if it 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

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

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

Answer: C) Di-electric strength

37. What is the power required? $I = 0.455$ Amps $R = 484$ Ohms $P = \text{_____}$ Watts

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

Answer: B) 100.2 watts

38. 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) 9 grams B) 8 grams
C) 6 grams D) 7 grams

Answer: C) 6 grams

39. How many watts for 1 horse power in metric system?

- A) 745.5 watts B) 735.5 watts
C) 755.5 watts D) 725.5 watts

Answer: B) 735.5 watts

40. How much power does it consume 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

41. What is the rated power if an adjustable resistor bears the following label $1.5 \text{ k ohms} / 0.08\text{A}$?

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

Answer: D) 9.6 watts

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

- A) Volume B) Specific gravity

- C) Density D) Mass

Answer: D) Mass

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

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

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

44. How many newtons for 1 kilogram?

- A) 981 Newtons B) 0.981 Newtons
C) 98.1 Newtons D) 9.81 Newtons

Answer: D) 9.81 Newtons

45. Which is the unit of resistance?

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

Answer: A) Ohm

46. What is called mass per unit volume of a substance?

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

Answer: C) Density

47. What is the area of a rectangle, whose length and breadth are 10cm and 8cm respectively?

- A) 80 cm^2 B) 90 cm^2
C) 75 cm^2 D) 85 cm^2

Answer: A) 80 cm^2

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

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

Answer: B) wb/m

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

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

Answer: C) 8

50. 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) 120 rpm
C) 180 rpm D) 160 rpm

Answer: C) 180 rpm