

**Duration: 30 Mins**

**Total Marks: 50**

**ID: ITISKILL9070P2**

Student Name: _____	Roll No: _____
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**1.** 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

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

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

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

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

**4.** What is the unit of intensity of magnetic field?

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

**5.** What is the resistance?  $I = 11.5$  Amps  $V = 380$  Volts  $R = \underline{\hspace{2cm}}$  Ohms

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

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

- A)  $0.40 \text{ m/sec}^2$     B)  $0.20 \text{ m/sec}^2$   
C)  $0.30 \text{ m/sec}^2$     D)  $0.10 \text{ m/sec}^2$

**7.** What is the unit of speed?

- A) Metre/second                  B) Metre/minute  
C) Metre/hour                      D) Metre/second<sup>2</sup>

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

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

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

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

**10.** What is the HCF of 18, 42, 24?

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

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

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

**12.** 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) 180 rpm                          B) 160 rpm  
C) 120 rpm                          D) 140 rpm

**13.** Which machine converts mechanical energy into electrical energy?

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

**14.** Which is mineral insulator

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

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

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

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

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

**17.** What is the side of a square whose area is  $625 \text{ mm}^2$ ?

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

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

- A)  $3745 \text{ cm}^2$     B)  $3750 \text{ cm}^2$   
C)  $3755 \text{ cm}^2$     D)  $3740 \text{ cm}^2$

19. 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) 30 km/hour                      B) 32 km/hour  
C) 36 km/hour                      D) 34 km/hour

20. 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) 2020 watts                      D) 2030 watts

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

- A)  $85 \text{ cm}^2$                       B)  $80 \text{ cm}^2$   
C)  $90 \text{ cm}^2$                       D)  $75 \text{ cm}^2$

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

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

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

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

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

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

25. How many newtons for 1 kilogram?

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

26. What is the mass if the density of a body is  $7.6 \text{ g/cm}^3$  and its volume is  $25 \text{ cm}^3$ ?

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

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

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

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

- A)  $(\frac{3}{10})$                               B)  $(\frac{12}{10})$

- C)  $(\frac{9}{10})$                               D)  $(\frac{13}{10})$

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

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

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

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

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

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

32. What is the length L<sub>2</sub>, if total length (L) is 2.75 metre and L<sub>1</sub>:L<sub>2</sub> = 2:3?

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

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

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

34. 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) 9.8 watts                              D) 9.6 watts

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

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

36. Which is brittle metal?

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

37. What is the square root of 0.017?

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

38. What is the formula for potential energy?

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

39. How many millimetres are there in 1 inch?

- A) 25.4 mm                              B) 24.5 mm

C) 2.54 mm

D) 2.45 mm

40. What is the mass in gram, if a force of 15 dynes acting on a mass  $m$  producing an acceleration of  $2.5 \text{ cm/sec}^2$ ?

A) 7 grams

B) 9 grams

C) 6 grams

D) 8 grams

41. Which one is non-metal?

A) Iron

B) Graphite

C) Brass

D) Mercury

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

A) 99.2 watts

B) 100.2 watts

C) 98.2 watts

D) 101.2 watts

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

A) 11 ohms

B) 7 ohm

C)  $1/17$  ohms

D) 17 ohms

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

A) 0.175

B) 0.185

C) 0.195

D) 0.165

45. Which is the unit of resistance?

A) Ohm

B) Ampere

C) Watt

D) Volt

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

A) 0.15% to 0.25%

B) 0.25% to 0.50%

C) 0.50% to 1.50%

D) 0.02% to 0.03%

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

A) 13.79

B) 13.69

C) 13.99

D) 13.89

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

A)  $2(3/2)$

B)  $2(1/3)$

C)  $2(2/3)$

D)  $2(4/3)$

49. Which insulator is used in over head lines?

A) Mica

B) P.V.C

C) Rubber

D) Porcelain

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

A) Speed

B) Velocity

C) Scalar quantity

D) Vector quantity