

**Duration: 30 Mins**

**Total Marks: 50**

**ID: ITISKILL2746XW**

Student Name: _____	Roll No: _____
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**1.** What is the capacity of a conical tank of radius 2 m and height 5m?

- A)  $11\text{ m}^3$                       B)  $21\text{ m}^3$   
C)  $31\text{ m}^3$                       D)  $41\text{ m}^3$

**2.** What is called if a body changes its position with respect to its surroundings?

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

**3.** What is called if a body posses both magnitude and direction of velocity?

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

**4.** What is the current Flow in the bulb?   
P = 550 watts  
R = 22 Ohms  
I = \_\_\_\_\_Amps

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

**5.** What is the primeter of scalene. Triangle having sides of 40mm, 20mm and 28mm?

- A) 78 mm                         B) 98 mm  
C) 88 mm                         D) 68 mm

**6.** What is the voltage of the immersion heater?   
P = 500 watts  
I = 2.27 Amps  
V = \_\_\_\_\_Volts

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

**7.** What is the square root of 0.017?

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

**8.** What is the area of an ellipse if the major and minor axes are 5 cm and 3 cm respectively?

- A)  $47\text{ cm}^2$                       B)  $27\text{ cm}^2$   
C)  $57\text{ cm}^2$                       D)  $37\text{ cm}^2$

**9.** Which is the unit of resistance?

- A) Watt                              B) Volt

- C) Ampere                         D) Ohm

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

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

**11.** 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 94%  
C) Cu 98%                         D) Cu 92%

**12.** What is the ore of aluminium?

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

**13.** How much work done in one hour, if a pump can raise 100 liters of water through a height of 200 meters in one minutes?

- A)  $12 \times 10^6$  kg meter              B)  $12 \times 10^7$  kg meter  
C)  $12 \times 10^4$  kg meter              D)  $12 \times 10^5$  kg meter

**14.** Which metal cannot be forged?

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

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

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

**16.** What is velocity of a body travels a distance of 168 metres in a line in 21 seconds?

- A) 8 m/sec                              B) 12 m/sec  
C) 10 m/sec                              D) 6 m/sec

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

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

**18.** What is the specific gravity of the metal, if the weighs 6.5

kgf in air and 3.5 kgf in water?

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

19. What is the volume of mercury in  $\text{cm}^3$ , if the mass (m) of mercury is 136 grams (g) and density (r) of mercury is  $13.6 \text{ g/cm}^3$ ?

- A)  $13.6 \text{ cm}^3$                       B)  $10.0 \text{ cm}^3$   
C)  $136 \text{ cm}^3$                       D)  $10.6 \text{ cm}^3$

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

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

21. Which law states about electromagnetic induction?

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

22. How much is 8% of 40 kg?

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

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

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

24. What is the cross sectional area of a circular ring of  $D = 38 \text{ mm}$  and  $d = 32 \text{ mm}$ ?

- A)  $320 \text{ mm}^2$                       B)  $340 \text{ mm}^2$   
C)  $330 \text{ mm}^2$                       D)  $350 \text{ mm}^2$

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

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

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

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

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

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

28. Which is the example for statically induced emf?

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

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

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

30. Which metal contains iron as a major content?

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

31. What is the formula for acceleration?

- A)  $\frac{\text{Metre}}{\text{second}^2}$                       B) Metre/minute  
C) Metre/second                      D) Metre/hour

32. What is the formula for velocity?

- A)  $\frac{\text{Change in velocity}}{\text{Time}}$                       B)  $\frac{\text{Change of momentum}}{\text{Time}}$   
C)  $\frac{\text{Distance covered}}{\text{Time}}$                       D)  $\frac{\text{Displacement}}{\text{Time}}$

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

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

34. What is the square root of 529?

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

35. How many watts for 1 horse power in British system?

- A) 726 watts                      B) 746 watts  
C) 756 watts                      D) 736 watts

36. How many newtons for 1 kilogram?

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

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

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

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

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

39. What is the volume (V) of mercury in  $\text{cm}^3$ , if mass (m) of mercury is 1 kg and density (r) is  $13.6 \text{ g/cm}^3$ ?

- A)  $73.23 \text{ cm}^3$                       B)  $73.53 \text{ cm}^3$   
C)  $73.33 \text{ cm}^3$                       D)  $73.43 \text{ cm}^3$

40. What is called if a body posses only magnitude or size alone?

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

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

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

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

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

43. What is the kinetic energy of a bullet of mass 5gm travels with a speed of 500 m/sec?

- A) 620 Joules
- B) 635 Joules
- C) 630 Joules
- D) 625 Joules

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

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

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

- A) Mass
- B) Specific gravity

C) Density

D) Volume

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

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

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

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

48. Which cast iron cannot be welded?

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

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

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

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

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