



**C) Hardness**

D) Toughness

C)  $85\text{ cm}^2$

D)  $90\text{ cm}^2$

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

A) Malleability

B) Tenacity

**C) Elasticity**

D) Plasticity

29. What is the perimeter of scalene. Triangle having sides of 40mm, 20mm and 28mm?

A) 68 mm

B) 78 mm

**C) 88 mm**

D) 98 mm

19. Which cast iron cannot be welded?

A) Grey cast iron

**B) White cast iron**

C) Malleable cast iron

D) Nodular cast iron

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

A)  $320\text{ mm}^2$

**B)  $330\text{ mm}^2$**

C)  $340\text{ mm}^2$

D)  $350\text{ mm}^2$

20. Which metal cannot be forged?

A) Alloy steel

B) Mild steel

C) Steel

**D) Cast iron**

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

A)  $27\text{ cm}^2$

B)  $37\text{ cm}^2$

**C)  $47\text{ cm}^2$**

D)  $57\text{ cm}^2$

21. 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

32. 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)  $41\text{ m}^3$

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

A) Mild steel - Rever battery

B) Electric furnace

**C) Blast furnace**

D) Cupola

33. What is the formula for velocity?

A) Distance covered/Time

**B) Displacement/Time**

C) Change in velocity/Time

D) Change of momentum/Time

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

**A) Cupola**

B) Mild steel - Blast furnace

C) Steel - Rever battery

D) Alloy metal - Electric furnace

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

A) Speed

B) Velocity

C) Vector quantity

**D) Scalar quantity**

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

A) Low alloy steel

B) High alloy steel

C) High speed steel

**D) Mild steel**

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

A) Speed

B) Velocity

**C) Vector quantity**

D) Scalar quantity

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

A) 0.02% to 0.03%

B) 0.15% to 0.25%

C) 0.25% to 0.50%

**D) 0.50% to 1.50%**

26. What is the ore of aluminium?

A) Hematite

B) Mallatite

**C) Bauxite**

D) Lemonite

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

A) Body at rest

B) Body at motion

C) Speed

**D) Velocity**

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

**A) Ductility**

B) Malleability

C) Hardness

D) Brittleness

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

A) Body at rest

**B) Body at motion**

C) Speed

D) Velocity

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

A)  $75\text{ cm}^2$

**B)  $80\text{ cm}^2$**

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

A) 6 m/sec

**B) 8 m/sec**

C) 10 m/sec

D) 12 m/sec

39. What is the formula for acceleration?

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

40. How many newtons for 1 kilogram?

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

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

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

42. 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 x 104 kg meter  
C) 12 x 106 kg meter  
B) **12 x 105 kg meter**  
D) 12 x 107 kg meter

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

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

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

- A) 639 Joules  
B) 649 Joules

C) 659 Joules

D) **669 Joules**

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

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

46. What is the square root of 0.017?

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

47. How much is 8% of 40 kg?

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

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

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

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

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

50. What is the square root of 529?

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