CGCUET Non-Medical Sample Paper

Duration: 50 mins
Marking Scheme: +1 for each correct answer, No Negative Marking

Section B: Physics & Chemistry (13 Questions)

1. **What is the SI unit of power?**
   a) Joule
   b) Watt
   c) Newton
   d) Volt

2. **Which of the following is a vector quantity?**
   a) Speed
   b) Work
   c) Force
   d) Energy

3. **What happens to the resistance of a conductor when its length is doubled?**
   a) Doubles
   b) Halves
   c) Remains the same
   d) Becomes zero

4. **Which gas is evolved during the reaction between zinc and dilute sulfuric acid?**
   a) Oxygen
   b) Hydrogen
   c) Carbon dioxide
   d) Nitrogen

5. **What is the chemical formula of quicklime?**
   a) CaO
   b) $Ca(OH)_2$
   c) $CaCO_3$
   d) $CaCl_2$

6. **What is the process by which heat is transferred in liquids and gases?**
   a) Conduction
   b) Convection
   c) Radiation
   d) Absorption

7. **Which of the following elements has the highest electronegativity?**
   a) Sodium
   b) Fluorine
   c) Chlorine
   d) Hydrogen

8. **Which of these is an example of a non-metallic conductor?**
   a) Copper
   b) Graphite
   c) Aluminum
   d) Silver

9. **What is the work done when a force of 10 N moves an object 5 m in the direction of the force?**
   a) 2 J
   b) 50 J
   c) 5 J
   d) 500 J

10. **Which acid is used in car batteries?**
    a) Nitric acid
    b) Sulfuric acid
    c) Hydrochloric acid
    d) Acetic acid
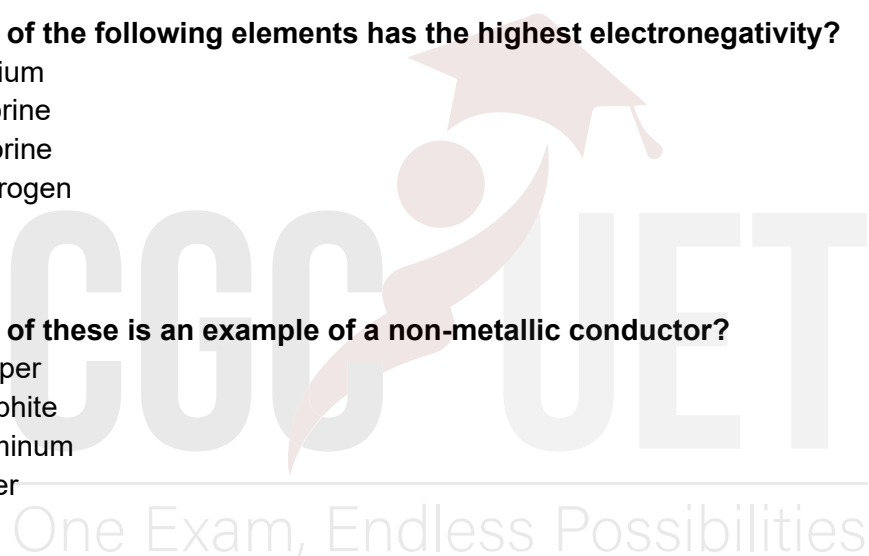
11. **Which physical state is highly compressible?**
    a) Solid
    b) Liquid
    c) Gas
    d) Plasma

12. **What is the pH of a neutral solution?**
    a) 1
    b) 7
    c) 14
    d) 10

13. **Which type of mirror is used in vehicle headlights?**
    a) Plane mirror
    b) Convex mirror
    c) Concave mirror
    d) Cylindrical mirror

Section B: Mathematics (12 Questions)

1. **If two lines intersect, then the vertically opposite angles are**

   (a) Equal

   (b) Unequal

   (c) Complementary

   (d) Supplementary

2. **The sum of all the angles of a triangle is**

   (a) 90°

   (b) 180°

   (c) 270°

(d) 360°

3. In a right-angled triangle, the square of the hypotenuse is equal to

(a) The sum of the squares of the other two sides

(b) The dierence of the squares of the other two sides

(c) The product of the squares of the other two sides

(d) Twice the sum of the squares of the other two sides

4. The area of a circle with radius 'r' is

(a) πr

(b) $2\pi r$

(c) πr^2

(d) $2\pi r^2$

5. The midpoint of the line segment joining the points (x_1, y_1) and (x_2, y_2) is

(a) $(x_1 + x_2/2, y_1 + y_2/2)$

(b) $(x_1 - x_2/2, y_1 - y_2/2)$

(c) $(x_1 x_2/2, y_1 y_2/2)$

(d) $(x_1/2, y_1/2)$

6. The slope of the line passing through the points (x_1, y_1) and (x_2, y_2) is

(a) $(y_2 - y_1)/(x_2 - x_1)$

(b) $(x_2 - x_1)/(y_2 - y_1)$

(c) $(y_1 - y_2)/(x_2 - x_1)$

(d) $(x_1 - x_2)/(y_1 - y_2)$

7. The value of sin 90° is

(a) 0

(b) 1

(c) 1/√2

(d) √3/2

8. The value of cos 0° is

(a) 0

(b) 1

(c) 1/√2

(d) √3/2

9. The derivative of sin x with respect to x is

(a) cos x

(b) -cos x

(c) sin x

(d) -sin x

10. The integral of x² with respect to x is

(a) x³/3

(b) 2x

(c) x³/2

(d) 3x²
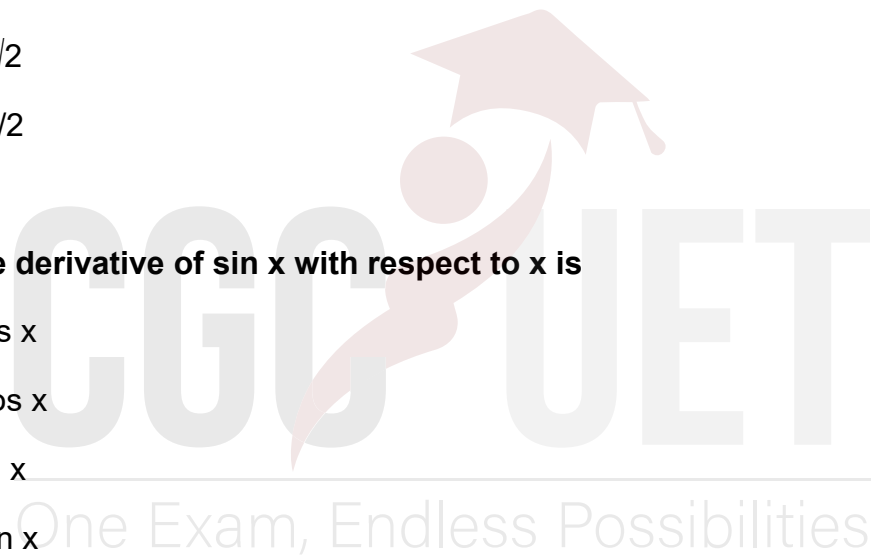
11. The sum of the rst 'n' natural numbers is

(a) n(n+1)/2

(b) n(n-1)/2

(c) n²/2

(d) n²/4

12. The probability of an event that cannot occur is

(a) 1

(b) 0

(c) 1/2

(d) -1