**B.Sc F. Y**

**Mechanics and Properties of Matter (P-I)**

**UNIT TEST –II**

**UNIT-II**

**SURFACE TENSION**

**MCQ With Answers**

1. The unit of surface tension in the CGS system is \_\_\_\_\_\_\_\_\_\_\_\_  
   a)N/m  
   b)Kg/cm  
   c)Dynes/cm  
   d) Dynes/m

Answer: c)Dynes/cm

1. The surface tension of water at 250C is \_\_\_\_\_\_\_\_\_\_\_\_  
    a) 90.0 dynes/cm  
    b) 45.63 dynes/cm  
    c) 82.5 dynes/cm  
    d) 72.14 dynes/cm

Ans: d) 72.14 dynes/cm

1. Shapes of drops of liquid are spherical because of \_\_\_\_\_\_\_\_\_\_\_\_  
   a) Viscosity  
   b) Conductivity  
   c) Absorption  
   d) Surface tension

Ans: d) Surface tension

1. **If the surface of a liquid is plane, then the angle of contact of the liquid with the walls of the container is­­­­­­­­­­­­­­­­------------------------------**  
   (a) Acute angle  
   (b) Obtuse angle  
   (c) 900  
   (d) 00

**Ans:** Answer: (d) 00

1. **7. The surface of the water in contact with the glass wall is ------------------**  
   (a) Plane  
   (b) Concave  
   (c) Convex  
   (d) Both a and b

**Ans**: (b) Concave

1. Adhesive forces and Cohesive forces are ---------------
2. Nuclear Forces
3. Molecular Forces
4. Long range forces
5. Electrostatic forces
6. Ans: Molecular Forces
7. ………………. are the Forces of attraction between molecules of same substances.
8. Adhesive Forces
9. Restoring forces
10. Cohesive forces
11. Deforming forces
12. Ans: Cohesive forces
13. Surface Tension ‘T’ can be given as (where, F is the Force acting, l is the length and A is the area of the body)-------------
14. T = F/l
15. T = F/A
16. T= F.l
17. T= F.A

Ans: T = F/l

1. Tendency of a liquid to minimize its surface area as small as possible is termed as----------
2. Surface Tension
3. Surface area
4. Viscosity
5. Surface charge

Ans: Surface Tension

1. SI Unit of surface tension----------------
2. Newton/ area
3. Newton/ meter sq.
4. Newton/ meter
5. Newton. Meter

Ans: Newton/ meter

1. Expression for excess pressure ‘P’ inside a liquid drop-------------
2. P = 2T/R
3. P = T/R
4. P = 4T/R
5. P = 2T/3R

Ans: P = 2T/R

1. Fergusson Method is usually preferred for a liquid with---------------
2. Large quantity
3. Small quantity
4. Infinitely large quantity
5. None of these

Ans: Small quantity

1. Density of water

a) 1 g/cm3

b) 0.5 g/cm3

c) 9.8 g/cm3

d) 0.01 g/cm3

Ans: a) 1 g/cm3

14. Which of the following method is used to determine the surface tension of liquid?

1. Bernoulli’s method
2. Jaeger’s method
3. Poiseuille’s method
4. Vibrational Viscometer method.

Ans: Jaeger’s method

1. There are ---------------- of a soap bubble.
2. Two free surfaces
3. Only a half surface
4. One free surface
5. None of the above

Ans: Two free surfaces

1. Due to the surface tension, the molecules on the surface of the soap bubble experience the net force in the ---------------- Normal to the surface.
2. In the inward direction
3. In the outward direction
4. Both (a) and (b)
5. Neither (a) nor (b)

Ans: In the inward direction

1. Expression for excess pressure ‘P’ inside a Soap bubble-------------
2. P = 2T/R
3. P = T/R
4. P = 4T/R
5. P = 2T/3R

Ans: P = 4T/R

1. The angle subtended between the tangents drawn at liquid surface and at solid surface inside the liquid at the point of contact is called ………….
2. No Contact angle
3. Angle of contact
4. double angle
5. None of the above.
6. Ans: Angle of contact
7. Dimension of surface tension
8. M1 T-2
9. M0 T-2
10. M-1 T-2
11. M1 T-1
12. Ans: M1 T-2
13. Surface tension decreases with increasing temperature
14. True
15. False
16. Sometimes true sometimes false
17. Cannot predict
18. Ans: True