10th CLASS- MATHEMATICS
SLIP TEST-1
DAY 09.12.2025
(CIRCLES & SURFACE AREAS AND VOLUMES)

Time : 40 Min **Max.Marks: 20**

I. Answer the following questions. **2 x 4 = 8 M**

1. A quadrilateral ABCD is drawn to circumscribe a circle. Prove that AB + CD = AD + BC
2. 2 cubes each of volume 64 cm^3 are joined end to end. Find the surface area of the resulting cuboid.

II. Answer the following questions. **4 x 2 = 8 M**

1. A tangent PQ at a point P of a circle of radius 5 cm meets a line through the centre 'O' at a point Q so that OQ=12 cm. find the length of PQ.
2. If TP and TQ are two tangents to a circle with centre 'O' so that $\angle POQ=110^0$, then find $\angle PTQ$
3. Consider the following situations. In each case find out whether you need to find the volume or area and Why?
   i) Quantity of water inside a bottle
   ii) Canvas needed for making a tent
   iii) Number of bags inside the lorry
   iv) Number of match sticks that can be put inside a match box.
4. Find the volume of a right circular cone of radius 6 cm and height 7 cm.

III. Answer the following questions. **4 x 1 = 4 M**

1. A tangent to a circle intersects it in _____ Points
2. Create a geometrical design involving 2 tangents drawn from an external point to the circle.
3. What is the curved surface area of a right circular cone with radius 'r' and slant heigh 'h'.
4. Identify the Correct relation [ ]

   p) C.S.A of a hemisphere i) $\frac{2}{3}\pi r^3$

   q) T.S.A of a hemisphere ii) $2\pi r^2$

   r) Volume of a hemisphere iii) $3\pi r^2$

A) p-I, q-ii, r-iii B) p-iii, q-ii, r-I C) p-ii, q-iii, r-I D) p-I, q-iii, r-ii