N.E.S High School, Bhandup (w)

III Preliminary Examination

Std: X /Div:__Roll NO: Sub –MATHS- II Marks:20

Date: 01/02/19 Time:1 Hr

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**Q.I] A) Solve the following** (2)

1)Write the equation of the which is parallel to y-axis & passes through points Q(-5,3).

2) If the radius of a solid hemisphere is 7cm,then find its total surface area ($\pi = \frac{22}{7}$ )

**B) solve the following** (2)

1) Which of the equations given below have graphs parallel to x-axis and which ones have graphs parallel to y-axis.

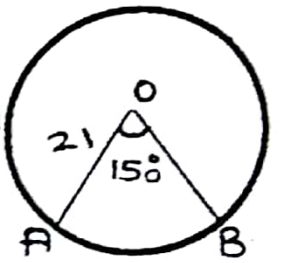
a) $x = 9$ c) $x + 8 = 0$

b) $y - 3 = 0$ d) $y = -6$

**Q.II] A) Solve the following** (4)

1) Total surface area of a cone is 616 sq.cm If the slant height of the cone is three times the radius of its base .Find its slant height ($\pi = \frac{22}{7}$ )

2) The measure of a central angle of a circle is $150^0$ and radius Of the circle is 21 cm.Find the length of the arc & area of the sector associated with the central angle

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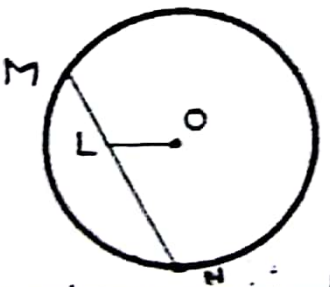
**B] Solve the following** (6)

1) Seg MN is a chord of a circle with center 0. MN= 25, L is a point on chord MN such that ML =9 and d (0,L) = 5 Find the radius of the circle



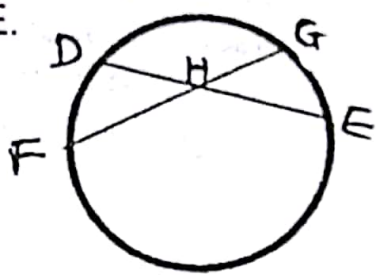

2) Volumes of two spheres are in ratio 8:27 Find their radii if one radius is greater than second by 5 cm.

**Q.III] Solve the following** **(4)**

1) P ( a,a-1) Q (a-3,a+1) R(-2a-1,-a-1)
S (-a ,-2a-1) are vertices of rectangle PQRS. Find the value of 'a' & hence find co-ordinates of vertices of rectangle PQRS.

**B] Complete the following activity based question** **(2)**

1) Chord DE & chord FG inter sect each other at point H,FH=15 HG =4,DH=8 .Complete the following to find HE.




☐ X HE = ☐ X ☐ .... By theorem of Intersecting chords

☐ X HE = ☐ X ☐ .... Substituting the values

$\therefore$ HE = $\frac{\square \times \square}{\square}$

HE = ☐ units.