



# Dnyansagar Coaching Classes, A'nagar

## Unit Test

### (Angle and its Measurement)

Std. - XI

Sub- Math-I

Time - 1hr

Max Marks - 20

#### Q.1 A) Solve any four.

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- i) Express the following angles in radians.
  - a)  $120^\circ$
  - b)  $-108^\circ$
- ii) Express following angles in degrees.
  - a)  $\frac{5\pi^c}{7}$
  - b)  $\frac{-7\pi^c}{24}$
- iii) If  $x^c = 405^\circ$  and  $y^c = \frac{-\pi^c}{12}$  Find  $x$  and  $y$ .
- iv) Find the length of arc of circle which subtends an angle of  $108^\circ$  at the centre. If the radius of circle is 15 cms.
- v) Find the area of the sector of circle which subtends an angle of  $120^\circ$  at the centre if the radius of the circle is 6 cms.
- vi) The sum of two angles is  $5\pi^c$  and their difference is  $60^\circ$ . Find the angles in degrees.

#### Q.2 A) Solve any four.

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- i) The measures of angles of triangle are in the ratio 2:3:5. Find their measures in radians.
- ii) A wire of length 10cms is bent so as to form an arc of a circle of radius 4cms. What is the angle subtended at the centre in degree?
- iii) OAB is a sector of the circle with centre O and radius 12cms. If  $m\angle AOB = 60^\circ$ . Find the difference between the areas of sector AOB and  $\Delta OAB$ .
- iv) The perimeter of sector of a circle, of area  $25\pi$  sq cms, is 20 cms. Find the area of sector.
- v) A horse is tied to a post by a rope. If the horse moves along a circular path, always keeping the rope tight and describes 88 meters when it traces  $72^\circ$  at the centre. Find the length of the rope.
- vi) Express following angles in degrees, minutes and seconds.
  - a)  $(200.6)^\circ$
  - b)  $(11.0133)^\circ$

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