



SHIKSHA CLASSES

Subject : Maths - I

Class : XI

Question Paper

1 : Angle and its Measurement

Total Marks :25

Time : 1 Hour

SECTION - A

Q.1 : Choose the correct option : 4

i) If the measures of angles of a quadrilateral are in the ratio 2 : 3 : 7 : 6, then their measures in

degrees will be

- a) $20^\circ, 40^\circ, 60^\circ, 80^\circ$
- b) $40^\circ, 60^\circ, 80^\circ, 100^\circ$
- c) $40^\circ, 60^\circ, 140^\circ, 120^\circ$
- d) $40^\circ, 60^\circ, 160^\circ, 120^\circ$

ii) Minute hand of a clock gains _____ on hour hand in one minute.

- a) $5^\circ 30'$ b) 59°
- c) $5^\circ 50'$ d) 360°

Q.2 : Determine which of the following pairs of angles are co-terminal : 2

- i) $-180^\circ, 540^\circ$
- ii) $900^\circ, -900^\circ$

SECTION B

: Solve the following : (ANY 3) 6

Q.3 : Convert the following into radians :

- i) 85° ii) $75^\circ 30'$

Q.4 : In $\triangle ABC$, if

$$m\angle A = \frac{7\pi^c}{36}, m\angle B = 120^\circ, \text{ find } \angle C \text{ in}$$

degree and radian.

Q.5 : Find the angle between hour - hand and minute - hand in a clock at :

i) twenty past seven.

Q.6 : The perimeter of a sector of the circle of area 64π sq. cm. is 56 cm. Find the area of the sector.

Q.7 : Find the radius of the circle in which a central angle of 60° intercepts an arc of length

$$37.4 \text{ cm. (use } \pi = \frac{22}{7} \text{)}.$$

SECTION C

: Solve the following : (ANY 3) 9

Q.8 : If two arcs of the same lengths in two circles subtend angles 65° and 110° at the centre. Find the ratio of their radii.

Q.9 : OPQ is the sector of a circle having centre at O and radius 15 cm. If $m\angle PQR = 30^\circ$, find the area enclosed by arc PQ and chord PQ.

Q.10 : In a right angled triangle, the acute angles are in the ratio 4:5. Find the angles of the triangle in degree and radians.

Q.11 : In a cyclic quadrilateral two adjacent angles are 40° and quadrilateral in degree. $\frac{\pi^c}{3}$.

Find the angles of the

Q.12 : Two arcs of the same length subtend angles of 60° and 75° at the centre of the two circles. What is the ratio of radii of two circles?

SECTION D

: Solve the following : (ANY 1) 4

Q.13 : Find the degree and radian measures of exterior and interior angles of regular.

- i) Hexagon
- ii) Octagon

Q.14 : The angles of a quadrilateral are in A.P. and the greatest angles is double the least. Find angles of the quadrilateral in radians.

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