SHIKSHA CLASSES

Subject : Geometry | **Question Paper** | **Total Marks** : 20

Class : X | **4. Geometric Construction** | **Time** : 1 Hour

Q. 1 A) Choose the correct alternative from objectives given below. **2**

1) The maximum number of tangents that can be drawn to a circle from a point out side it is. .....

a) 3 b) 2 c) one and only one d) 0

2) What is the point of concurrence of the altitudes of a triangle known as?

a) Circumference b) In centre

c) Orthocenter d) Centroid

B) Solve the following question. **1**

Construct a tangent to a circle with centre P and radius 3.2 cm at any point M on it.

Q 2 A) Attempt any ONE of the following. **2**

1) Draw a circle with center 'O' and radius 3.5 cm. Take a point P at a distance 5.7 cm from the center. Draw tangents to circle from point P.

2) Draw a circle of radius 3.6cm. Draw a tangent to the circle at any point on it without using centre.

Q 2 B) Attempt any ONE of the following. **2**

1) Draw seg PQ = 7cm. Divide it in the ratio 3:2.

2) $\Delta ABC \sim \Delta PQR$, in ΔABC, AB = 5.4 cm, BC = 4.2 cm, AC = 6.0 cm. AB : PQ = 3 : 2. Construct ΔABC and ΔPQR.

Q.3 A) Attempt any ONE of the following. **3**

1) Draw a circle with radius 4.1 cm. Construct tangents to the circle from a point at a distance of 7.3 cm from the centre.

2) Draw a circle with centre O and radius 3cm. Take a point P at a distance of 7cm from the centre. Draw tangents to the circle from point P.

Q.3 B) Attempt any ONE of the following. **3**

1) Draw a circle of radius 3.5 cm. Take a point R at a distance of 7cm from the centre. Draw tangents to the circle from point R.

2) Construct any ΔABC construct $\Delta A'B'C'$ such that $AB : A'B = 5 : 3$ and

$\Delta ABC \sim \Delta A'BC'$

Q. 4 : Attempt any ONE of the following. **4**

1) $\Delta PQR \sim \Delta LTR$. In $\Delta PQR, PQ = 4.2cm$ $QR = 5.4cm$ $PR = 4.8cm$. Construct ΔPQR and ΔLTR, Such that $\frac{PQ}{LT} = \frac{3}{4}$.

2) $\Delta ABC \sim \Delta APQ$ In $\Delta ABC, AB = 6.0cm$, $\angle BAC = 110^0$, $CA = 5.5cm$. $\frac{BA}{PA} = \frac{5}{3}$ construct ΔAPQ .

Q. 5 : Attempt any ONE of the following. **3**

1) Draw ΔABC with side $BC = 6cm$, $\angle B = 45^0$, $\angle A = 100^0$. construct a triangle whose sides are $\frac{4}{7}$ times the corresponding sides of ΔABC .

2) $\Delta AMT \sim \Delta AHE$. In $\Delta AMT, AM = 6.3cm$, $\angle TAM = 50^0$, $AT = 5.6cm$ $\frac{AM}{AH} = \frac{7}{5}$ construct ΔAHE .

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