

Model Question Paper

Geometry - Part III

10th Standard

Maths

Reg.No. :

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I. Answer all the questions.

II. Use blue pen only.

III. Question number 15 is compulsory.

Time : 01:00:00 Hrs

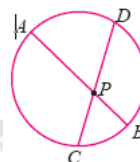
Total Marks : 40

5 x 1 = 5

Part-A

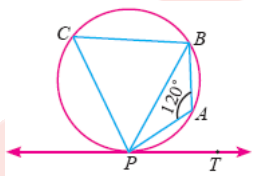
- 1) The perimeters of two similar triangles are 24 cm and 18 cm respectively. If one side of the first triangle is 8 cm, then the corresponding side of the other triangle is
(a) 4 cm (b) 3 cm (c) 9 cm (d) 6 cm
- 2) AB and CD are two chords of a circle which when produced to meet at a point P such that AB = 5 cm, AP = 8 cm, and CD = 2 cm then PD =
(a) 12 cm (b) 5 cm (c) 6 cm (d) 4 cm
- 3)

In the adjoining figure, chords AB and CD intersect at P. If AB = 16 cm, PD = 8 cm, PC = 6 and AP > PB, then AP =



- (a) 8 cm (b) 4 cm (c) 12 cm (d) 6 cm
- 4) A point P is 26 cm away from the centre O of a circle and PT is the tangent drawn from P to the circle is 10 cm, then OT is equal to
(a) 36 cm (b) 20 cm (c) 18 cm (d) 24 cm
- 5)

In the figure, if $\angle PAB = 120^\circ$ then $\angle BPT =$



- (a) 120° (b) 30° (c) 40° (d) 60°

Part-B

- 6) Find the value of x in each of the following diagrams.

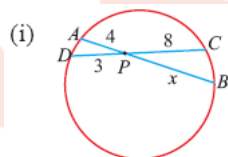
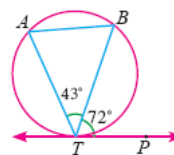


Fig. 6.34

- 7) In the figure TP is a tangent to a circle. A and B are two points on the circle. If $\angle BTP = 72^\circ$ and $\angle ATB = 43^\circ$ find $\angle ABT$.



- 8) AB and CD are two chords of a circle which intersect each other internally at P. If CP = 4 cm, AP = 8 cm, PB = 2 cm, then find PD.
- 9) AB and CD are two chords of a circle which intersect each other externally at P. If AB = 4 cm, BP = 5 cm and PD = 3 cm, then find CD.
- 10) In a $\triangle ABC$, D and E are points on the sides AB and AC respectively such that $DE \parallel BC$. If AD = 8 cm, AB = 12 cm and AE = 12 cm, then find CE.

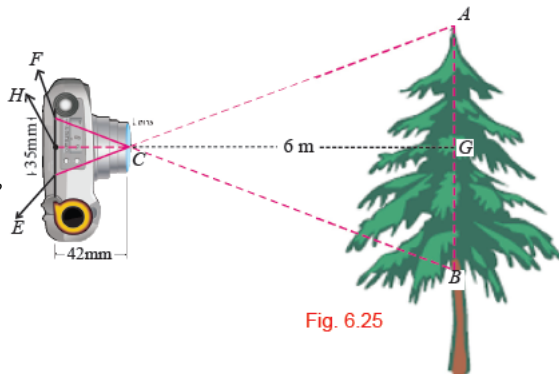
Part-C

- 11) The internal bisector of $\triangle ABC$ meets BC at D and the external bisector of $\angle C$ meets BC produced at E. Prove that $\frac{BD}{BE} = \frac{CD}{CE}$.
- 12) ABCD is a quadrilateral with AB = AD. If AE and AF are internal bisectors of $\angle BAC$ and $\angle DAC$ respectively, then prove that $EF \parallel BD$.

5 x 5 = 25

- 13) The image of a tree on the film of a camera is of length 35 mm, the distance from the lens to the film is 42 mm and the distance from the lens to the tree is 6 m. How tall is

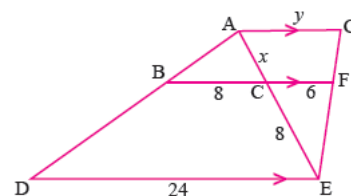
the portion of the tree being photographed?



14)

Find the unknown values in each of the following figures. All lengths are given in centimeters. (All measures are not in scale)

(i)



- 15) a) The image of a man of height 1.8 m, is of length 1.5 cm on the film of a camera. If the film is 3 cm from the lens of the camera, how far is the man from the camera?

(OR)

- b) A girl of height 120 cm is walking away from the base of a lamp-post at a speed of 0.6 m/sec. If the lamp is 3.6 m above the ground level, then find the length of her shadow after 4 seconds.

