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COMMON SECOND MID-TERM TEST - 2019

Standard IX

Reg.No. 9 3 0 6

Time: 1.30 hours MATHEMATICS Marks: 50

Part - A

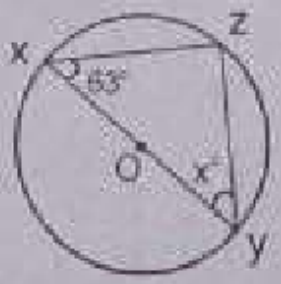
I. Choose the correct answer: 7 x 1 = 7

1. Degree of the constant polynomial is _____.
   a) 3 b) 2 c) 1 d) 0
2. Which of the following is a solution of the equation $2x - y = 6$
   a) (2,4) b) (4,2) c) (3,–1) d) (0,6)
3. G.C.D of any two prime numbers is _____.
   a) –1 b) 0 c) 1 d) 2
4. A chord is at a distance of 15 cm from the centre of the circle of radius 25 cm. The length of the chord is _____.
   a) 25 cm b) 20 cm c) 40 cm d) 18 cm
5. If the y-co-ordinate of a point is zero, then the point always lies _____.
   a) in the I quadrant b) in the II quadrant
   c) on x-axis d) on y-axis
6. The point whose ordinate is 4 and which lies on the y-axis is _____.
   a) (4,0) b) (0,4) c) (1,4) d) (4,2)
7. The distance between the two points (2,3) and (1,4) is _____.
   a) 2 b) $\sqrt{56}$ c) $\sqrt{10}$ d) $\sqrt{2}$

Part - B

II. Answer any 5 questions: (Ques.No.14 is compulsory) 5 x 2 = 10

8. Solve by the method of elimination:
   $x - y = 5$; $3x + 2y = 25$
9. Find the G.C.D of $16x^3y^2$, $24xy^2z$
10. In which quadrant does the following points lie?
    a) (3,–8) b) (–1,–3) c) (2,5) d) (–7,3)
11. Show that the following points A(3,1), B(6,4) and C(8,6) lies on a straight line.
12. A chord is 12 cm away from the centre of circle of radius 15 cm. Find the length of the chord.
13. Find the value of x° in the following figure.



14. Solve $3x - 4y = 10$ and $4x + 3y = 5$ by the method of cross multiplicatin.

Part - C

III. Answer any 5 questions: (Ques.No.21 is compulsory) 5 x 5 = 25

15. Solve by using method of substitution:
$2x - 3y = 7$, $5x + y = 9$
16. Two numbers are in the ratio 5:6. If 8 is subtracted from each of the numbers, the ratio becomes 4:5, find the numbers.
17. Show that the points A(–4,–3), B(3,1), C(3,6), D(4,2) taken in that order form the vertices of a parallelogram.
18. Plot the following points (–3,3), (2,3), (–6,–1), (5,–1) in the cartesian plane. Discuss the type of the diagram by joining all the points taken in order.
19. In a circle AB and CD are two parallel chords with centre O and radius 10 cm such that AB = 16 cm, CD = 12 cm determine the distance between the two chords.
20. Complete the sentences:
    1. Angle in a semi circle is _____ angle.
    2. Angle in a major segment is _____ angle.
    3. Angle in a minor segment is _____ angle.
21. The sum of the numerator and denominator of a fraction is 12. If the denominator is increased by 3 the fraction becomes $\frac{1}{2}$. Find the fraction.

Part - D

IV. Answer any one question: 8 x 1 = 8

22. Construct ΔPQR whose sides are PQ = 6 cm, $\angle Q = 60°$ and QR = 7 cm and locate its orthocentre.

(or)

Draw an equilateral triangle of sides 6.5 cm and locate its orthocentre.

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