Sardar Kaurey Khan Public Higher Secondary School Muzaffargarh

Class: 9th **Subject: Math**

Date: 25-04-2020 **Total Marks: 15**

Objective Time: 20 Minutes

Q.1 Tick the correct answer: (15)

1- What should b e added to complete the square of $X^4 + 64$= _____.

a) $8X^2$ b) $-8X^2$ c) $16x^2$ d) $4x^2$

2- HCF of X-2 and $X^2 + X - 6$ is

a) $X^2 + X - 6$ b) X+3 c) X-2 d) X+2

3- Which of the following is the solution of inequality $3 - 4X \leq 11$? _____

a) -8 b) -2 c) $\frac{-14}{4}$ d) none of these

4- If the capacity C of an elevator is at most 1600 pounds then _____.

a) C < 1600 b) C ≥ 1600 c) C ≤ 1600 d) > 1600

5- Point (2,-3) lies in quadrant

a) 1 b) 2 c) 3 d) 4

6- If (x-1, y+1) = (0,0) then (x,y) is

a) (1,-1) b) (-1, 1) c) (1, 1) d) (-1, -1)

7- A triangle having all sides different is called

a) Isosceles b) scalens c) equilateral d) none

8- Distance between the points (1,0) and ((0,1) is

a) 0 b) 1 c) $\sqrt{2}$ d) 2

9- Diagonal of a parallelogram _____ each other at a point

a) Parallel b perpendicular c) intersect d) none

10- In a triangle there can be _____ right angle

a) One b) two c) three d) none

11- The right bisector of the sides of a triangle are

a) Parallel b) congruent c) concurrent d) none of these

12- If two medians of a triangle are congruent then the triangle will be

a) Isosceles b) equilateral c) right angle d) acute angle

13- One angle on the base of an isosceles triangle is 30^0 . What is the measure of its vertical angle ___

a) 30^0 b) 60^0 c) 90^0 d) 120^0

14- The medians of a triangle cut each other in the ratio _____

a) 4:1 b) 3:1 c) 2:1 d) 1:1

15- A quadrilateral having each angle equal to 90^0 is called ____

a) Parallelogram b) rectangle c) trapezium d) rhombus

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Class: 9th **Time: 2:40 Hours** **Subject: Math**

Date: 25-04-2020 **Total Marks: 60**

Q.2 Note attempt any 6 parts. (2x6=12)

1- Find HCF of $8x^4 - 128$, $12x^3 - 96$

2- Find LCM of $39\,x^7y^3z$ and $91\,x^5y^6z^7$

3- Define least common multiple (L.C.M).

4- Write the names for finding HCF.

5- Define medical equation.

6- Solve for X $|3 + 2x| = |6x - 7|$

7- Solve $-5 \le \frac{4-3x}{2} < 1$

8- Define transitive property of inequality.

9- Find value m and c of the following lines by expressing in the form of y = mx + c, 2x + 3y - 1 = 0

Q.3 Note attempt any 6 parts. (2x6=12)

1- Draw the graph of the relations $f=\frac{9}{5}c + 32$

2- Find the distance between A (2,- 6) , B (3,- 6).

3- Find the mid point of A (2,5) and B (-1, 1).

4- The end point of a line segment PQ is (-3, 6) and its mid point is (5, 8) find the coordination of the end point of Q.

5- Define collinear points.

6- Define equilateral triangle.

7- Define Cartesian plane.

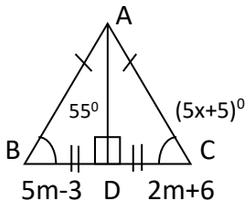
8- Verify whether the point (5,3) lies on the lime 2x-y+1 = 0 or not.

9- Solve $\frac{3}{y-1} - 2 = \frac{3y}{y-1}$, $y \neq 1$

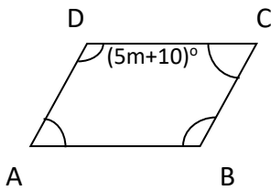
Q.4 Note attempt any 6 parts. (2x6=12)

1- Define congruent triangles.

2- Fine the value of unknown for the given congruent triangles.



3- Find value of x and m



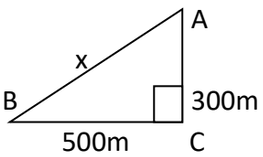
4- Define bisector of an angle.

5- Define ratio.

6- Define Parallelogram.

7- Verify that $\triangle$ having the following measure of sides are right angled if a = 16cm, b=30cm, c=34cm

8- Find value of x in the fig.



Extensive Part

Q.5 Compulsory (8)

Prove that any point equidistant from the end points of a line segment is on the right bisector of it

Or Prove any point inside an angle, equidistant from its arm is on the bisector of it.

Note: Attempt any two questions. (8+8=16)

Q.6. (A) Find value of K for which the following expression will become a perfect square $x^4-4x^3+10x^2-Kx+9$.

(B) Simplify $\left(\frac{x+1}{x-1} - \frac{x-1}{x+1} - \frac{4x}{x^2+1}\right) + \frac{4x}{x^4-1}$

Q.7 (A) Solve and check for extraneous solution $\sqrt[3]{2x+3} = \sqrt[3]{x-1}$

(B) Solve the following inequalities 1-2x < 5-x ≤ 25-6x

Q.8 (A) Solve the following pair of equations in x and y graphically x+y=0 and 2x-y+3=0

(B) Show whether the points with vertices (5, -2) , (5,4) and (-4, 1) are vertices of an equilateral triangle or an isosceles triangle.

Q.9 (A) Construct a right angled $\triangle$ measure of whose hypotenuse is 5cm and one side is 3.2cm.

(B) Construct the $\triangle$ xyz. Draw their three medians and show that they are concurrent myz = 4.1cm, m<y=60 and m<z =75°