GOVERNMENT URDU HIGH SCHOOL YALGONDAPALYA [NEELSANDRA] 2018 – 19

SET - 1

School Level Passing package Paper for Slow Lerners

Subject : Mathematics – 2018 – 19

Total No of Questions: 10 Subject code : 81 E

Time : 2 Hours Max Marks : 43

1. Two poles of height 6 m and 11 m stand on a plane ground. If the distance between the feet of the poles is 12 m, find the distance between their tops. 2 X 11 = 22

2. Draw a pair of tangents to a circle of radius 4 cm from a point which is 9 cm away from the centre of the circle. Measure the length of the tangents.

3. Draw a pair of tangents to a circle of radius 5 cm such that angle between the radii is 60°.

4.Solve: x + y = 5 and x – y = 7

5,Ages of the patients admitted to a hospital during a year is given below. Calculate the mode for the data given.

Age(in years	5 – 15	15 -25	25 -35	35 - 45	45 -55	55 - 65
No. of patients	6	11	21	23	14	5

OR

5[A]The daily expenditure on food of 25 households are given below. Calculate the mean daily expenditure.

Daily expenditure in Rs.	100 - 150	150-200	200 – 250	250-300	300 - 350
Number of households	4	5	12	5	4

6.Find the H.C.F and L.C.M of 28 and 126 by prime factor method.

7. Prove that $2 + \sqrt{3}$ is irrational number.

8 Check whether $g(x) = x^2 + 3x + 1$ is a factor of $p(x) = 3x^4 + 5x^3 - 7x^2 + 2x + 2$

OR 8[a] Find the sum and product of zeros of the polynomial $6x^2 - 3 - 7x$.

OR 8 [b] Find the quadratic polynomial whose sum and product of its zeros respectively

[a] 3 and 6

9. Find the roots of the following quadratic equations by completing the square

$2x^2 + 6x + 4$ OR $3x^2 - 4x - 8 = 0$ By formula method

10. Find the distance between the points (- 5, 7) and (- 1, 3) OR

Find the distance between the origin and a point (8, 6).

11. If tan 2A = cot(A – 18°), where 2A s an acute angle, find the value of A. OR

11[a]. Prove the identity : $\sqrt{\frac{1-\cos\theta}{1+\cos\theta}} = \text{cosec}\,\theta - \cot\theta$ **OR**

11[b] Prove that $\frac{1+\sec\theta}{\sec\theta} = \frac{\sin^2\theta}{1-\cos\theta}$

3 X 3 = 9

12. The length of tangents drawn from an external point to a circle are equal. Prove.

OR

The tangent at any point of a circle is perpendicular to the radius through the point of contact.

13. Construct a triangle of sides 4cm, 5cm, and 6cm and then a triangle similar to it whose sides are $\frac{3}{5}$ of the corresponding sides of the first triangle.

14. Marks obtained by 60 students, out of 50 in a mathematic examination are given below. Calculate the median for the data given.

Marks	0 - 10	10 -20	20 – 30	30 -40	40 -50
No.of Students	5	12	18	15	10

OR Draw the Ogive for the following data.

Daily Income	100-120	120-140	140-160	160-180	180-200
No.Of workers	12	14	8	6	10

15.. State and prove Thales theorem.

4 X 3 = 12

16. Solve graphically: x + y = 14 and x – y =4

17. Find the three numbers in AP whose sum is 15 and their product is 105. OR

The sum of the third and the seventh term of an A.P. is 6 and their product is 8 . Find the sum of first sixteen terms of the A.P.

HAPPY NEW YEAR 2019 GOOD RESULT FOR ALL SCHOOLS

GOVERNMENT URDU HIGH SCHOOL YALGONDAPALYA [NEELSANDRA] 2018 – 19

SET - 2

School Level Passing package Paper for Slow Lerners

Subject : Mathematics – 2018 – 19

Total No of Questions: 10 **Subject code : 81 E**

Time : 2 Hours **Max Marks : 43** **2 X 11 = 22**

1.A ladder 10 m long reaches a window 8 m above the ground. Find the distance of the foot of the ladder from the base of the wall.

2. Draw a line segment of length 8 cm and divide it in the ratio 3 : 5

3. Draw a pair of tangents to a circle of radius 4cm such that angle between the tangents is 80^0.

4.Solve: 2 x + 2y = 5 and x – 2y = 10

5,Ages of the patients admitted to a hospital during a year is given below. Calculate the mode for the data given.

Age(in years	5 – 15	15 -25	25 -35	35 - 45	45 -55	55 - 65
No. of patients	4	10	21	23	12	4

OR

5[A]The daily expenditure on food of 25 households are given below. Calculate the mean daily expenditure.

Daily expenditure in Rs.	100 - 150	150-200	200 – 250	250-300	300 - 350
Number of households	2	4	18	4	6

6. Find the H.C.F of 135 and 345 using Euclid's Division algorithm.

7. Prove that $2 + 3\sqrt{5}$ is irrational number.

8.Divide $p(x) = x^3 - 3x^2 + 5x - 3$ by $g(x) = x^2 - 2$ and find the quotient and remainder. OR

Find the quadratic polynomial whose sum and product of its zeros respectively are i) 5 and 10 OR

OR 8[a] Find the sum and product of zeros of the polynomial $x^2 - 2x - 24$.

9. Find the roots of the following quadratic equations by completing the square

$2x^2 + 5x + 8$ OR $2x^2 - 8x - 6 = 0$ By formula method

10. Find the distance between the points (- 8, 9) and (- 4, 3) OR

Find the distance between the origin and a point (10, 8).

11. If Sec4A = cosec (A – 20°), where 2A s an acute angle, find the value of A.

11[a] . (sin A + cosec A)^2 + (cos A + sec A)^2 = 7 + tan^{2}A + cot^2 A OR

11[b]. (cosec A – sin A) (sec A – cos A) = $\frac{1}{tan\,A + Cot\,A}$

3 X 3 = 9

12.Theorem 2.2 : ***If a line divides any two sides of a triangle in the same ratio, then the line is parallel to the third side OR***

12[a]* Theorem 2.3 :** ***If in two triangles, corresponding angles are equal, then their corresponding sides are in the same ratio (or proportion) and hence the two triangles are similar

13. Construct a triangle 6cm 7cm and 8cm similar to a given triangle ABC with its sides equal to $\frac{5}{3}$Of the corresponding sides of the triangle.

14. Calculate the median for the data given.

Marks	0 - 10	10 -20	20 – 30	30 -40	40 -50
No.of Students	4	8	26	8	4

OR Draw the Ogive for the following data.

Daily Income	100-120	120-140	140-160	160-180	180-200
No.Of workers	8	12	16	6	10

15. In a right triangle, the square of the square of the hypotenuse is equal to the sum of the squares of the other two sides .

16. Solve graphically: 2x + 3y = 9 and 4x – 6y = 18

4 X 3 = 12

17. Rao started work in 1995 at an annual salary of Rs. 5000 and received an increment of Rs.200 each year.

In which year did his income reach Rs.7000.

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