

NOTRE DAME HOLYCROSS DCHOOL MOHARPARA
1ST PERIODICAL TEST , CLASS- 10, SUBJECT- MATHEMATICS

1. ANSWER THE FOLLOWING QUESTIONS(1X10=10)

- I. If α and β are the zeroes of the polynomial $2x^2-13x+6$ then find the value of $\frac{1}{\alpha} + \frac{1}{\beta}$
- II. What is the value of x for which $2x$, $(x+10)$, $(3x+2)$ are the three consecutive terms of A.P ?
- III. If -2 is a root of the equation $x^2+ kx - \frac{5}{4} = 0$ then what is the value of k ?
- IV. The sum of first 20 terms of an A.P is $1, 4, 7, 10$?
- V. Find the quadratic polynomial whose zeroes are 2 and -6 .
- VI. Find the 6th term from the end of the A.P $17, 14, 11$(-40).
- VII. Find the zeroes of $5x^2- 4 - 8x$
- VIII. Find the cubic polynomial whose zeroes are $2, -3$ and 4 .
- IX. Find the next term of the A.P $\sqrt{2} + \sqrt{8} + \sqrt{18}$
- X. Find the quadratic polynomial, the sum of whose roots is $\frac{5}{2}$ and their product is 1 .

2. ANSWER THE FOLLOWING CASE STUDY QUESTIONS(1X5=5)

The fund allotted for a village is $x^3+6x^2+20x+9$ for the covid 19 pandemic. The officer has divided the fund equally among families of the village and each family receives an amount of x^2+2x+2 after distributing some amount is left.

- i. How many families are there in the village?
a) $X+4$ b) $x-3$ c) $x-4$ d) $x+3$
- ii. If an amount of ₹1911 is left after distribution, what is the value of x ?
a) 190 b)290 c)191 d)291
- iii. How much amount does each family receive?
a) 24490 b) 34860 c) 22540 d) 36865
- iv. What is the amount of fund allocated?
a) 7272759 b) 7572681 c) 6972846 d) 8274888
- v. How many families are there in the village?
a) 191 b) 98 c)187 d) 195

3. ANSWER THE FOLLOWING QUESTIONS(2x4=8)

- i. If α and β are the zeroes of the polynomial $P(x)= 6x^2+x-2$ then find the value of $\frac{\alpha}{\beta} + \frac{\beta}{\alpha}$?.
- ii. Find the zeroes of $P(x)= 2\sqrt{3} x^2- 5x+\sqrt{3}$
- iii. The 17th term of an A.P is -4 and its 13th term is -16 find the A.P
- iv. Find the sum of the A.P $(-5)+(-8)+(-11)+\dots+(-230)$.

4. ANSWER THE FOLLOWING QUESTIONS(3x3=9)

- i. The sum of the first n terms of an A.P is $\frac{5n^2}{2} + \frac{3n}{2}$ find the 20th term of this A.p
- ii. Find the zeros of the polynomial $p(x)= 3x^2-x-4$ and verify the relationship between the zeroes and the coefficient.
- iii. On dividing $3x^3+x^2+2x+5$ by a polynomial $g(x)$, the quotient and remainder are $(3x-5)$ and $(9x+10)$ respectively. Find $g(x)$.

NOTRE DAME HOLYCROSS DCHOOL MOHARPARA
1ST PERIODICAL TEST , CLASS- 10, SUBJECT- MATHEMATICS

5. ANSWER THE FOLLOWING QUESTIONS(4x2=8)

- i. If $\sqrt{3}$ and $-\sqrt{3}$ are two zeroes of $2x^4-3x^3-5x^2+9x-3$ then find all the zeroes of the polynomial?
- ii. The sum of the 2nd and 7th term of an A.P is 30. If its 15th term is 1 less than twice its 18th term . Find the A.P ?