



PERIODIC TEST 1 (APRIL, 2023)

SUBJECT-MATHEMATICS

GRADE- X

TIME: 1 ½ HOUR

M.M: 40

GENERAL INSTRUCTIONS:

1. This question paper consists of 21 questions and 5 sections.
2. All questions are compulsory.
3. Section A consists of 11 questions carrying 1 mark each.
4. Section B consists of 4 Very Short questions carrying 02 marks each.
5. Section C consists of 4 Short Answer type questions carrying 03 marks each.
6. Section D consists of 1 case study question carrying 4 marks.
7. Section E consists of 1 Long answer type question carrying 5 marks

SECTION-A

1×11=11

1. Find the HCF of 8, 9, 25.
2. Check if 1452 is divisible by 11?
3. Express 98 as a product of its primes.
4. If one zero of the quadratic polynomial $x^2 + 3x + k$ is 2, then find the value of k.
5. Find the zeroes of the quadratic polynomial $x^2 - 15x + 50$.
6. What is the number(s) of zeroes that a quadratic polynomial has/have?
7. Name the type of solution the pair of equations:
 $3x - 5y = 7$ and $-6x + 10y = 7$ have

8. If in the equation $x + 2y = 10$, the value of y is 6, then find the value of x .
9. Zeros of $p(z) = z^2 - 36$ are _____ and _____ .
10. The pair of linear equations $2x + 3y = 5$ and $4x + 6y = 10$ is _____
(consistent/ dependent).
11. If $\text{HCF}(16, y) = 8$ and $\text{LCM}(16, y) = 48$, then find the value of y .

SECTION- B

2×4=8

12. Express 5005 number as a product of its prime factors.
13. Find the zeroes of the quadratic polynomial $x^2 - 2x - 8$ and verify the relationship between the zeroes and the coefficients.
14. Write the general form of linear equation in two variables.
15. On comparing the ratios a_1/a_2 , b_1/b_2 and c_1/c_2 , find out whether the lines representing the following pairs of linear equations intersect at a point, are parallel or coincident:
- $$5x - 4y + 8 = 0$$
- $$7x + 6y - 9 = 0$$

SECTION- C

3×4=12

16. The coach of a cricket team buys 7 bats and 6 balls for 3800. Later, she buys 3 bats and 5 balls for 1750. Find the cost of each bat and each ball.
17. Find the quadratic polynomial when sum and product of roots is 1,1 respectively.
18. Five years ago, Nuri was thrice as old as Sonu. Ten years later, Nuri will be twice as old as Sonu. How old are Nuri and Sonu?
19. Find a quadratic polynomial when the sum of its zeroes is 4 and the product of its zeroes is 1.

SECTION- D

4×1=4

20. A part of monthly hostel charges is fixed and the remaining depends on the number of days one has taken food in the mess. When a student A takes food for 20 days she has to pay 1000 as hostel charges whereas a student B, who takes food for 26 days, pays 1180 as hostel charges. Find the fixed charges and the cost of food per day.

SECTION- E

5×1=5

21. Draw the graphs of the equations $x - y + 1 = 0$ and $3x + 2y - 12 = 0$.

Determine the coordinates of the vertices of the triangle formed by these lines and the x-axis, and shade the triangular region.

GLSSS