ATOMIC ENERGY CENTRAL SCHOOL NO 5
ANUSHAKTINAGAR MUMAI-94
PERIODIC TEST-1, 2023-24

Subject-Mathematics **Class-IX**

Marks-40 **Time-90 Min**

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SECTION A (Choose the correct answer) 1x10=10m

1) The irrational number between 2, 2.5 is?

(A) $\sqrt{5}$ (B) $\sqrt{11}$ (C) $\sqrt{26}$ (D) $\sqrt{12.5}$

2) The ordinate of the point(3,2) is

(A) 0 (B) 3 (C) 2 (D) any number

3) Points (1, – 1), (2, – 2), (4, – 5), (– 3, – 4)

(A) lie in II quadrant (B) lie in III quadrant

(C) lie in IV quadrant (D) do not lie in the same quadrant

4) The perpendicular distance of the point P (3, 4) from the y-axis is

(A) 3 (B) 4 (C) 5 (D) 7

5) $\sqrt{5}$ is a polynomial of degree

(A) 2 (B) 0 (C) 1 (D) 1 / 2

6) If p(x) = x + 3, then p(1) equal to

(A) 0 (B) 4 (C) 1 (D) -4

7) The coefficient of x^2 in the expansion of $(x + 1)^3$ is

(A) 1 (B) 9 (C) 6 (D) 3

8) If $a = 2 + \sqrt{3}$, then find the value of $a - 1/a$

A) - 4 (B) 4 (C) -1 (D) none

9) **Assertion** The polynomial **7** x has degree 1.

Reason The variable has power one.

(A) Both Assertion and reason are correct and Reason is the correct explanation for the assertion

(B) Both Assertion and reason are correct and Reason is not the correct explanation for the assertion

(C) Assertion is true but Reason is false

(D Both Assertion and reason are false

10) . **Assertion** The sum of any two irrational numbers is always an irrational

Reason Sum of rational is rational and sum of irrational is irrational

(A) Both Assertion and reason are correct and Reason is the correct explanation for the assertion

(B) Both Assertion and reason are correct and Reason is not the correct explanation for the assertion

(C) Assertion is true but Reason is false

(D Both Assertion and reason are false

Section B

Answer the following questions- 5x2m=10

11) Write any two axioms of Euclid

12)Verify whether 2 and 0 are zeroes of the polynomial $x^2 - 2x$.

13) Which of the following points lie on y-axis?

A (1, 1), B (1, 0), C (0, 1), D (2, 0), E (0, – 1), F (– 1, 0), G (0, 5), H (– 7, 0), I (3, 3).

14) Express $0.6+0.\overline{7}+0.4\overline{7}$ in the form $\frac{p}{q}$, where p and q are integers and $q \neq 0$.

15) The product $\sqrt[3]{2} \cdot \sqrt[4]{2} \cdot \sqrt[12]{32}$ equals

Section C

Answer the following questions- 4x3m=12

16)Expand $(4a - 2b - 3c)^2$

17) By using suitable identity, find the value of: (a) $(-6)^3 + 13^3 + (-7)^3$ b) $(28)^2 - (21)^2$

18)Evaluate the using suitable identities: $(99)^3$

19) Find any three solutions of the linear equation x + 2y = 8 .

Section D

Answer the following questions- 4x2m=8

20) Manoj planned his birthday in an orphanage, He decided to distribute 2 apples to the children and three apples to the adults working there along with the birthday cake. He distributed about 60 apples in all.

i. How can we represent the situation if we take x as the number of children and y as the number of adults.

a) x+ 2y = 60 b) 2x + 3y = 60 c) 3x+ 2y = 60 d) 3x+ y =60

ii. If the number of adults were 12 find the number of children.

a) 12 b) 14 c) 24 d) 36

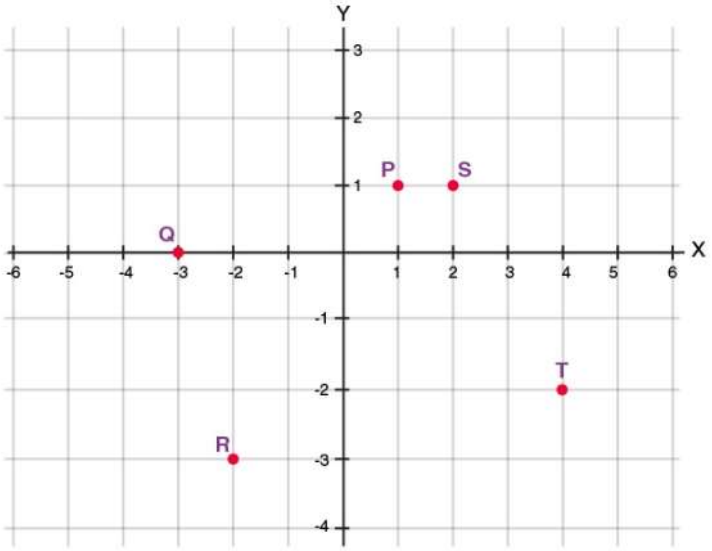
iii. If the number of children were 15 then the number of adults were

a) 5 b) 4 c) 6 d) 10

iv. The equation 3y- 5x= 25 in the standard form is

a)3x- 5y = 25 b) -5x + 3y +25 = 0 c) - 3y + 5x = 25 d) 5x -3y + 25 =0

21) Look at the following graph and answer the questions given below:



a) Write the coordinates of P,Q,R,S and T. (2)

b) In which quadrant do the points R, T lie. (1)

c) What is the sum of abscissa of points P and R? (1)
