Section A

1. Rationalize the denominator of

2. Simplify using BODMAS rule 7-5x2 of3÷(35-7-8) ÷6

3. Evaluate 0.7*5+5.2*4-25

4. Multiply 5.23 and 0.68, express the product obtained in three significant digits.

5. Find the square root of 0.1764

6. Factories \( x^2-9x+20 \)

7. What is unit set
8. What are the types of triangle, explain

9. In triangle ABC, < A = 60°, < B = 35° name its smallest side

10. What can a triangle can have

Section B

11. Find the HCF of 40,36,76

12. Evaluate

13. Anil contains 5Rs, 2Rs and 1Rs coins in the ratio 1:2:5 by numbers, if the total value of all the coins be Rs 35.2; find the number of each type of coins.

14. Separate the following terms into constant and variables of the following

-8, 5x+2z, 6x xy z, 5-3x

15. The perimeter of a triangle is 8y2-9y+6 = 0 and its two sides are 4y2-7y and 4y2+14, find its third side.

16. If a+b = 8and ab = 15, find a³=b³

17. Factories 10+6(a+b) – 5 (a+b)²

18. Given the universal set = {-7,-3,-1,0,5,6,8,9} find

A = {x:x<2} b)B = {y:y =2n+3, n belongs to N}

19. State the statements of inequalities.

20. In triangle ABC, D is any point in side BC show that a) AB+BD>AD b) AC+CD>AD c) AB+BC+AC>2AD

Section C

21. If a = 5x-10y, b = 6x+3y and c = 5x+2y, find a) a+b b) 2a-3b

22. Show that (x a-b) (b-c) (c-a) = 1

23. If 5x-4y = 7 xy = 6; find 125x³-64y³

24. From the given diagram, find
a) \( \text{AuB-C} \)  

b) \( \text{B-(AnC)} \)  

c)\( \text{(BnC) Ua} \)  

d)\( \text{(A-B)u(A-C)} \)

25. For what value of \( x \) the lines will be parallel to each other?

26. Prove that the angles of a triangle are equal to two right angles.