CLASS: VIII **FULL MARKS: 50**

SUBJECT: MATHEMATICS **TIME: 1 HOUR 15 MINUTES**

Section – A (20 Marks)

(Attempt all the questions from this section)

1. Answer the following **[2 × 5]**

a) Divide the sum of $\frac{-15}{7}$ and $2\frac{3}{5}$ by their difference.

b) Find the sum without adding. 1 + 3 + 7 + 9 + 11 + 19 + 21 + 23 + 29

c) Evaluate $\sqrt[3]{8} + \sqrt[3]{.027} + \sqrt[3]{.064}$.

d) Find out the value of $4x^3 - 2x^2 + 5x - 4$, when x = 3

e) Evaluate $\left\{\left(\frac{-1}{4}\right)^3\right\}^{-2}$

2. **[3 + 3 + 3 + 1]**

a) Simplify and write in exponential form of $5^{-5} \times 5^2 \div 5^{-6} + (2^2 \times 5)^2 + \left(\frac{2}{5}\right)^{-1} + 2^{-1} + \left(\frac{1}{7}\right)^{-1}$

b) Given that $\sqrt{1,444} = 38$, then find the value of $\sqrt{0.1444} + \sqrt{14.44}$.

c) Divide the number 4374 by smallest number so that the quotient is a perfect cube and also find the cube root of quotient.

d) Factorise $mp^3 - np^2 + qp$

Section –B (20 Marks) (Attempt any three questions from this section)

3. **[3 + 3 + 4]**

a) Write a Pythagorean triplets whose one number is 20.

b) Divide the sum of $^{11}/_5$ and $^{19}/_7$ by the product of $^{-3}/_5$ and $^{1}/_2$.

c) A boy walks 15m south from his house and turns east to walk 36 m to reach his friend's house. Then he returns diagonally from his friend's house to reach back to his house.so find out the distance did he walk while returning.

4. **[3 + 3 + 4]**

a) simplify $\left(\frac{z^a}{z^b}\right)^{\frac{1}{ab}} \times \left(\frac{z^b}{z^c}\right)^{\frac{1}{bc}} \times \left(\frac{z^c}{z^a}\right)^{\frac{1}{ca}}$

b) $l^3 - 4l^2 + 2l - 8 - lm + 4m$

c) The highest score in a cricket test match in an innings was $\frac{3}{13}$ of the total and the next highest sore was $\frac{2}{5}$ of remaining. If the difference between two scores was 48 runs, then find the total score.

5. **[3 + 3 + 4]**

a) Difference of two perfect cube is 602. If the cube root of the greater of two numbers is 11, find the cube root of the smaller number.

b) If 2women or 3 girls take 30 hrs to do a certain piece of work, how long will 4 women and 9 girls working together take to complete the work?

c) If a sum of rupees $(32a^3 - 76a^2 + 72a - 18)$ is divided equally among $(8a - 3)$ persons. Find the amount received by each person.