QUIZEN – Number System(9M01)

Learning Level 1	Learning Level 2	Learning Level 3
Q - Remembering (knowledge-based questions)	I - Applying (application-based questions)	E - Evaluating (evaluation-based questions)
U - Understanding (comprehension-based questions)	Z - Analyzing (analysis-based questions)	N - Creating (creation-based questions)

Learning Level 1

1. Define rational numbers.

2. Give an example of a rational number that is not an integer.

3. What is the difference between terminating and non-terminating decimals?

4. State the decimal expansion of 3/7 in words.

5. State the decimal expansion of 5/8 up to two decimal places.

Learning Level 2

6. Simplify: (5/3) + (2/5) - (1/15).

7. Express 0.2 recurring as a fraction in its simplest form.

8. Find the value of (1.2 recurring) x (0.6 recurring).

9. Prove that the sum of two irrational numbers is not always irrational.

10. If (a/b) = (c/d), prove that (a + c)/(b + d) = (2ac + bd)/(ad + bc).

11. Evaluate: (1/2) + (1/4) + (1/8) + ... to infinity.

12. If the decimal expansion of a rational number is non-terminating but repeating, prove that it can be expressed as a/b, where a and b are integers and b is not divisible by any prime number other than 2 or 5.

13. Suppose p and q are prime numbers such that p < q. Prove that there exist infinitely many irrational numbers between p and q.

14. If a and b are rational numbers such that $a^2 + b^2 = 0$, prove that a = b = 0.

15. Create an example of a real number that is not a rational number and explain why it is not rational.