REVISION TEST 01 : REAL NUMBERS
CLASS: X : MATHEMATICS

M.M. 30 Marks **T.T. 1 hr**

SECTION – A(2 marks each)

1. If HCF(6, a) = 2 and LCM(6, a) = 60 then find the value of a.

2. Write the condition to be satisfied by q so that a rational number $\frac{p}{q}$ has a terminating expression.

3. Show that 12^n cannot end with the digit 0 or 5 for any natural number n.

SECTION – B(3 marks each)

4. Using Euclid's division algorithm, find the HCF of 2160 and 3520.

5. Find the HCF and LCM of 144, 180 and 192 by using prime factorization method.

6. Prove that $2+3\sqrt{5}$ is an irrational number.

7. In a morning walk, three persons step off together. Their steps measure 80 cm, 85 cm and 90 cm respectively. What is the minimum distance each should walk so that all can cover the same distance in complete steps?

SECTION – C(4 marks each)

8. Show that any positive even integer is of the form 6q or 6q + 2 or 6q + 4 where $q \in Z$.

9. Prove that $\sqrt{2}+\sqrt{3}$ is an irrational number.

10. Use Euclid's division lemma to show that the cube of any positive integer is of the form 9m, 9m + 1 or 9m + 8.