

**Class: X**                      **Formative Assessment - I**

**Sub: MATHEMATICS**

**marks: 25**

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**I. Solve any 3 of the following problems.**                      **3 x 4 = 12**

1. Find the LCM and HCF of 72 and 108 by prime factorization method.
2. Prove that  $6 + \sqrt{2}$  is an irrational.
3. Expand:  $\text{Log}x^2y^3z^4$ .
4. Write the decimal form of  $15/16$ .

**II. Answer any 3 of the following questions.**                      **3 x 2 = 6**

5. Check whether  $6^n$  can end with the digit 0 for any natural number n.
6. Determine the value of  $\log_{81}^3$ .
7. Write the expression  $2\log 3 - 3\log 2$  as  $\log N$ . And find value.
8. Express 0.375 as rational number.

**III. Fill in the blanks.**                      **4 x ½ = 2**

1. Exponential form of  $5 = \log_3^{243}$  is \_\_\_\_\_
2. Logarithmic form of  $2^4 = 16$  is \_\_\_\_\_
3.  $\text{Log}_a^{xy} =$  \_\_\_\_\_
4.  $\log_a^x)^m =$  \_\_\_\_\_