

Lesson Based Assessment Test

Chapter : Real Numbers

Marks : 20

Subject : **Mathematics**

Time : 40 Minutes

General Instructions :

-  This question paper has a total of 11 questions; questions have been selected and prepared from the comprehensive question bank of lesson-based assessment.
-  Any missing data may be suitably assumed and follow the instructions given for the questions.
-  No space is provided for rough work in this question paper.
-  The time allotted for answering the question paper is given at the top of the question paper and the numbers given on the right side indicate the full marks for the questions.

- I. For each of the following questions/incomplete statements, four alternatives are given. Only one of them is correct or most appropriate. Choose the correct alternative and write the complete answer with its letter.** **3 × 1 = 3**

1. 'a' is an odd number and 'b' is a number divisible by 3. If the L.C.M of 'a' and 'b' is 'p' then the L.C.M of 3a and 2b is,

(A) p^2 (B) 5p (C) 6p (D) 3p

2. The prime factors of 30 is,

(A) 2, 3, 5 (B) 5, 3 (C) 15, 2 (D) 6, 5

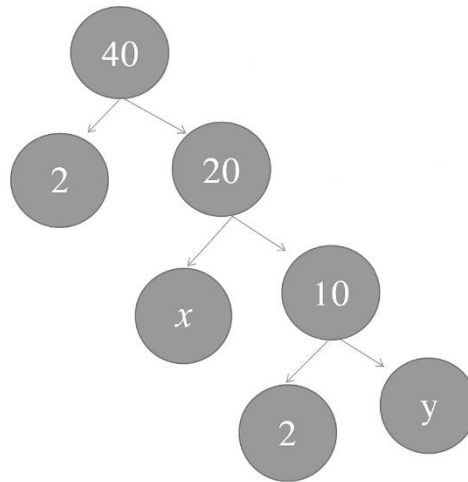
3. The H.C.F of $a = 2^x \times 3^2$ and $b = 2^3 \times 3^4$ is $2^2 \times 3^2$. Then the value of x is

(A) 1 (B) 2 (C) 3 (D) 4

- II. Answer the following questions.**

3 × 1 = 3

4. Write the number of prime factors of $2^3 \times 3^2 \times 5$.
5. Find the maximum length of the rod which can measure the rods of length 24m and 36m exactly.
6. Observe the given factor tree and find the value of x and y.



III. Answer the following questions.

$$2 \times 2 = 4$$

7. Express 864 in prime factor form.
8. What is a composite number ? Which is the composite number among 23 and 24 ?

IV. Answer the following questions.

$$2 \times 3 = 6$$

9. Show by contradiction that $\sqrt{18}$ is irrational.
10. Find the H.C.F and L.C.M of the numbers 510 and 92 by the method of prime factorization and verify that $\text{L.C.M} \times \text{H.C.F} = \text{The product of the numbers}$.

V. Answer the following questions.

$$1 \times 4 = 4$$

11. The H.C.F of two numbers is 24 and the L.C.M is 864. If their difference is 48, find the numbers.
