TEST - PAPER (CBSE/NCERT)

REAL NUMBERS

SESSION -2024-25

CLASS - 10th

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By. Er. Dharmendra Sir   **7974073108, 9584873492**

DPM CLASSES

6th to 10th (Math's & Science), 11th & 12th (Physics, Chemistry, Math's)
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Time : 1:00 hrs   -: Test - Real Numbers :-   mm : 40

Q.1. Multiple choice questions :-

(i) The largest number which divides 70 and 125, leaving remainder 5 and 8 respectively, is :

(a) 13   (b) 65   (c) 875   (d) 1750

(ii) If two positive integers a and b are written as $a = x^3 y^2$ and $b = xy^3$; x, y are prime numbers, then HCF (a, b) is :

(a) xy (b) xy^2 (c) $x^3 y^3$ (d) $x^3 y^2$

(iii) The product of a non-zero rational number and an irrational number is :

(a) always irrational   (b) always rational
(c) rational or irrational   (d) one.

(iv) The least number that is divisible by all the numbers from 1 to 10 (both inclusive) is :

(a) 10   (b) 100   (c) 504   (d) 2520

(v) HCF of (6, 20) is :

(a) 6   (b) 20   (c) 2   (d) 120

1.

Q.2. Fill in the blanks :—

(i) $\sqrt{3}$ is a/an ------ number.

(ii) $\sqrt{p}$ is called a ------, where p is prime number.

(iii) Product of the smallest power of each common prime factors in the numbers is called ------.

(iv) Any number p/q, where p and q are co-prime integers and q ≠ 0 is called ------.

(v) HCF (a, b) × LCM (a, b) = ------.

Q.3(a) Match the columns :—
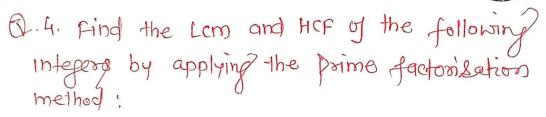
(i) 2n + 1, where n is any positive integer   (a) Real Numbers

(ii) 2m, where m is any positive integer.   (b) Imaginary numbers

(iii) Rational and irrational number   (c) Odd numbers

(iv) $\sqrt{-p}$, where p is positive integer   (d) Even numbers

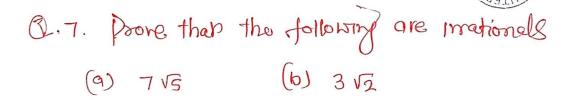(v) Positive integers   (e) Natural Numbers

2.

Q.3(b) Find the Lcm and HCF of the ~~two~~ following pairs of integers and verify that LCM × HCF = Product of the two numbers.

(a)   6 and 20   (b)   26 and 91

Q.4. Find the Lcm and HCF of the following integers by applying the Prime factorisation method :

(a)   8, 9 and 25   (b)   17, 23 and 29

Q.5. Given that Hcf $(306, 657) = 9$, find Lcm $(306, 657)$.

Q.6. Prove that $\sqrt{5}$ is irrational.

Q.7. Prove that the following are irrationals

(a) $7\sqrt{5}$ (b) $3\sqrt{2}$

Q.8. Prove that $\sqrt{3} + \sqrt{5}$ is irrational.

3.

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