



EDUCATION POINT TELMOCHO (DHANBAD)

Mock Test - 1

Chapter:- Real numbers

Sub:- Mathematics

Class:- X

F.M:- 20

Each Question Carries 2 marks

1. Choose the correct options from the followings:-

a) If the HCF of 65 and 117 is expressible in the form $65m - 117$, then the value of m is

- i. 4 ii. 2
iii. 1 iii. 3

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

- i. xy ii. xy^2
iii. x^3y^3 iv. x^2y^2

2. Write the statement of Euclid's division lemma.

3. Without actually performing long division, find if $\frac{987}{10500}$ will have terminating or non-terminating repeating decimal. Give reason for your answer.

4. Show that 12^n can't end with digit 0 or 5 for any natural number n .

5. Prove that $\sqrt{p} + \sqrt{q}$ is irrational, where p and q are primes.

6. Show that cube of any positive integer is of the form of $6q + r$, q is an integer and $r = 0, 1, 2, 3, 4, 5$ is also of the form of $6m + r$

7. For any positive integer n , prove that $n^3 - n$ is divisible by 6.

8. Using Euclid's division algorithm, find the largest number that divides 1251, 9377 and 15628 leaving remainders 1, 2, 3 respectively.

9. Six bells commence tolling together at an intervals of 2, 4, 6, 8, 10 and 12 minutes respectively. In 30 hours, how many times did they toll together.