1. Are 30 and 45 co-prime?
   A. Yes
   B. No
   C. Only sometimes
   D. Cannot say (B)

Explanation : 30 = 2 × 3 × 5 and 45 = 3 × 3 × 5. They share 3 and 5, so they are not co-prime.

2. Are 57 and 85 co-prime?
   A. Yes
   B. No
   C. Only if 85 is prime
   D. Only if 57 is even (A)

Explanation: 57 = 3 × 19 and 85 = 5 × 17. They have no common prime factor, so they are co-prime.

3. Are 121 and 1331 co-prime?
   A. Yes
   B. No
   C. Only if 121 is prime
   D. Cannot say (B)

Explanation: 121 = 11 × 11 and 1331 = 11 × 11 × 11. They share 11, so they are not co-prime.

4. Are 343 and 216 co-prime?
   A. Yes
   B. No
   C. Only if 216 is prime
   D. Only if 343 is even (A)

Explanation: 343 = 7 × 7 × 7 and 216 = 2 × 2 × 2 × 3 × 3 × 3. They have no common factor other than 1.

5. Is 225 divisible by 27?
   A. Yes
   B. No
   C. Only by remainder
   D. Cannot say (B)

Explanation : 225 = 3^2 × 5^2 but 27 = 3^3. One more factor of 3 is needed, so 225 is not divisible by 27.

6. Is 96 divisible by 24?
   A. Yes
   B. No
   C. Only by 12
   D. Only by 6 (A)

Explanation : 96 = 2^5 × 3 and 24 = 2^3 × 3. All prime factors of 24 are included in 96.

7. Is 343 divisible by 17?
   A. Yes
   B. No
   C. Only if 17 is composite
   D. Cannot say (B)

Explanation : 343 = 7^3 and it has no factor 17, so it is not divisible by 17.

8. Is 999 divisible by 99?
   A. Yes B. No
   C. Only by 9 D. Only by 11 (B)

Explanation : 999 = 3^3 × 37 and 99 = 3^2 × 11. Since 11 is missing in 999, it is not divisible by 99.

9. If one number has prime factorization 2×3×72 × 3 × 72×3×7 and another has 3×7×113 × 7 × 113×7×11, are they co-prime?
   A. Yes
   B. No
   C. Only if 11 is removed
   D. Only if 2 is removed (B)

Explanation : They share 3 and 7, so they are not co-prime.

10. Which statement is correct?
    A. Any two prime numbers are always co-prime
    B. Any two different prime numbers are co-prime
    C. All co-prime numbers are prime
    D. Two equal prime numbers are co-prime (B)

Explanation : Two different prime numbers share no common factor except 1. But the same prime with itself shares that prime number too.