1. The LCM of smallest two digit composite number and smallest composite number is

(a) 12 (b) 4 (c) 20 (d) 44

2. If p and q are positive integers such that $p = ab^2$ and $q = a^2b$, where a and b are prime numbers, then the $LCM(p,q)$ is

(a) ab (b) a^2b^2 (c) a^3b^2 (d) a^3b^3

3. The largest number which divides 70 and 125 leaving remainders 5 and 8 respectively is

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

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

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

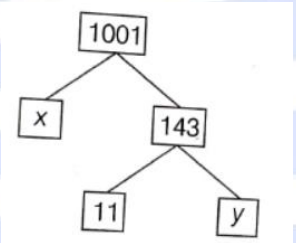
5. The number $(7\times6\times5\times4\times3\times2\times1)+5$ is ..... number.

(a) Prime (b) Composite (c) Can't say (d) None of these

6. The total number of factors of a prime number is

(a) 1 (b) 2 (c) 0 (d) 3

7. The values of x and y is the given figure are



(a) 7,13 (b) 13,7 (c) 9,12 (d) 12,9

8. HCF of 96 and 404 is equal to…….

(a) 2 (b) 3 (c) 4 (d) 5

9. Total number of distinct primes in the prime factorization of number 27300

(a) 5 (b) 7 (c) 13 (d) 21

10. The unit place digit of HCF of $2^2\times3^2\times5^3\times7, 2^3\times3^3\times5^2\times7^2$ and $3\times5\times7\times11$ is

(a) 70 (b) 105 (c) 175 (d) 225

11. If the HCF of 65 and 117 is expressible in the form $65m-117$, then find the value of m.

(a) 1 (b) 2 (c) 3 (d) 4

12. The largest number which divides 615 and 963 leaving remainder 6 in each case is

(a) 82 (b) 95 (c) 87 (d) 93

13. If $a = 2^3\times3, b = 2\times3\times5, c = 3^n\times5$ and LCM $(a,b,c) = 2^3\times3^2\times5$, then n is equal to

(a) 1 (b) 2 (c) 3 (d) 4

14. The product of two numbers is 320 and their LCM is 80. The HCF of the numbers is

(a) 8 (b) 4 (c) 16 (d) 10

15. The LCM of two numbers is 1200. Which of the following cannot be their HCF?

(a) 600 (b) 500 (c) 400 (d) 200

16. If $HCF(a,b)=12$ and $a\times b=1800$, then $LCM(a,b)=$

(a) 3600 (b) 900 (c) 150 (d) 90

17. The HCF and LCM of 12,21 and 15 respectively, are

(a) 3,140 (b) 12,420 (c) 3,420 (d) 420, 3

18. Arnav has $40cm$ long red and $84cm$ long blue ribbon. He cuts each ribbon into pieces such that all pieces are of equal length. What is the length of each piece?

(a) $4cm$ as it is the HCF of 40 and 84 (b) $4cm$ as it is the LCM of 40 and 84

(c) $12cm$ as it is the LCM of 40 and 84 (d) $12cm$ as it is the HCF of 40 and 84

19. Three bulbs red, green and yellow flash at intervals of 80 seconds, 90 seconds and 110 seconds. All three flash together at 8:00 am. At what time will the three bulbs flash altogether again?

(a) 8:12 am (b) $9:12am$ (c) $10:12am$ (d) 11:12 am

20. Four bells toll at intervals of $10s,15s$, $20s$ and $30s$ respectively. If they toll together at 10:00 am at what time will they toll together for the first time after $10am$?

(a) $10:01am$ (b) $10:02am$ (c) $10:00:30am$ (d) $10:00:45am$