# NUMBER SYSTEM – COMPLETE

1. The number 2594* is completely divisible by 6. The smallest value of* can be:
   a) 2 b) 6 c) 4 d) 0
2. If 764xy is divisible by 90, then what is the value of x + y?
   a) 1 b) 3 c) 5 d) 6
3. 2810 to obtain a number exactly divisible by
   a) 1 b) 3 c) 5 d) 7
4. If 78Q928R is divisible by 6, then what values can Q and R take?
   a) Q=2&R=3 b) Q=1&R=4 c) Q=1&R=2 d) Q=3&R=3
5. The number 456*85 is completely divisible by 3. Smallest whole digit number in place of * can be:
   a) 0 b) 1 c) 2 d) 3
6. Identify the least number that is exactly divisible by 24, 28, 36 and 48.
   a) 1,004 b) 1,008 c) 1,012 d) 1,016
7. Which of the given numbers is divisible by 11?
   a) 1042 b) 1045 c) 1047 d) 1048
8. What is the least number that should be subtracted from 3592 to obtain a number exactly divisible by 19?
   a) 0 b) 1 c) 2 d) 3
9. Sum of the digits of a 3-digit number subtracted from the number. The resulting number is divisible by
   a) 6 b) 9 c) Both 6 and 5 d) All 3, 6 and 9
10. If a and b are natural numbers and (a - b) is divisible by 3, then $a^3 - b^3$ is divisible by:
    a) 3 but not by 9 b) 9 c) 6 d) 27
11. What is the least number that should be subtracted from 3592 to obtain a number exactly divisible by 19?
    a) 0 b) 1 c) 2 d) 3
12. If a number is divisible by 63, then it is also divisible by:
    a) 7 b) 11 c) 13 d) 17
13. What is the least perfect square, which is divisible by 24, 30 and 607?
    a) 14400 b) 3600 c) 32400 d) 1600
14. Which number should be multiplied by 5324 to make it a perfect square?
    a) 11 b) 7 c) 9 d) 3
15. What is the number that should be subtracted from 682 to make it a perfect square?
    a) 2 b) 4 c) 6 d) 8
16. What should be multiplied to 2880 to make it a perfect square?
    a) 2 b) 3 c) 5 d) 7
17. What is the value of X, When $X=i^1+i^2+i^3+i^4+i^5$?
    a) 0 b) 1 c) i d) -i
18. What is unit digit of the sum? $1 +2^2+3^3 +4^4 +5^5 +6^6$?
    a) 4 b) 9 c) 0 d) 7
19. What is the unit digit in $27^{20}$?
    a) 1 b) 7 c) 9 d) 3
20. What is the remainder if $8^{25}$ is divided by 7?
    a) 8 b) 1 c) 0 d) 25
21. Find the remainder when $2^{21}$ is divided by 6.
    a) 1 b) 0 c) 4 d) 2
22. x and y are 2 numbers which when divided by 6 leave a remainder of 4 and 5 respectively. What will be the remainder when y + x is divided by 62?
    a) 6 b) 9 c) 1 d) None of these
23. What is the remainder when we divide 125! by $10^{31}$?
    a) 0 b) 1 c) 4 d) 5

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24. Find the least number which when divided by 5, 7 and 13 leaves the same remainder 3 in each case
    a) 398 b) 453 c) 458 d) 197
25. Find the greatest number that divides 42, 90 and 182 so as to leave the same remainder in each case.
    a) 2 b) 4 c) 7 d) 9
26. Find the smallest two-digit number that divides 587 and 730 leaving remainder 2 in each case.
    a) 15 b) 19 c) 13 d) None of these
27. Find the largest two-digit number that divides 673 and 865, leaving remainder 1 in each.
    a) 91 b) 93 c) 96 d) 98
28. what is the highest power of 2 in the expression: $(1800 \times 25 \times 4^8 \times 21^2 \times 45^2)$?
    a) 16 b) 19 c) 20 d) 21
29. If the sum of two numbers is 20 and their HCF and LCM are 1 and 91 respectively, then the square of one of the numbers is:
    a) 16 b) 25 c) 36 d) 49
30. If LCM and HCF of two numbers are 162 and 9 respectively. Prime factors of the product of two numbers are:
    a) 3 and 7 b) 3 and 5 c) 2 and 5 d) 2 and 3
31. If LCM and HCF of two numbers are equal and product of two numbers is 3136, find the HCF of the numbers.
    a) 44 b) 46 c) 54 d) 56
32. If LCM and HCF of two numbers are 360 and 2 respectively, product of two numbers can be expressed as:
    a) $2^4 x 3 x 5$ b) $2 x 3^2 x 5^4$ c) $2^4 x 3^2 x 5$ d) $2^4 x 3 x 5^2$
33. The LCM of four numbers is 48. Three of them are 6, 8, and 12. What can be the fourth number?
    a) 16 b) 18 c) 20 d) 24
34. The reciprocal of HCF and LCM of two numbers are 1/12 & 1/312 respectively. If one of the numbers is 24, find the other one.
    a) 156 b) 468 c) 117 d) 234
35. If the product of two co-prime numbers is 783, then find the LCM of these numbers.
    a) 1 b) 783 c) LCM will be = to HCF d) LCM cannot be calculated
36. If LCM and HCF of two numbers are 294 and 49 respectively, product of two numbers can be expressed as:
    a) $2 \times 3 \times 7^4$ b) $2^2 X 3^2 X 7^2$ c) $2^4 X 3^2 X 7$ d) $2^2 X 3^2 X 7$
37. If LCM and HCF of two numbers are equal and product of two numbers is 3136, find the HCF of the numbers.
    a) 44 b) 46 c) 54 d) 56
38. Four bells begin to toll together and then each one at intervals of 6, 7, 8 and 9 seconds respectively. The number of times they will toll together in the next 2 hours is:
    a) 14 b) 15 c) 13 d) 11
39. A light blink after every 3 seconds, another light blinks after every 5 seconds and the third one blinks after every 16 seconds. How many times do they blink together in half an hour?
    a) 7 times b) 4 times c) 240 times d) 8 times
40. The difference of two numbers is 14. Their LCM and HCF are 441 and 7 respectively. Find the numbers.
    a) 21, 35 b) 35, 49 c) 49, 63 d) 63, 77
41. Difference of LCM and HCF of two numbers is 8. Sum of their LCM and HCF is 24. if one number is 8. find the other.
    a) 24 b) 16 c) 12 d) 5
42. M and N are two distinct natural numbers. HCF and LCM of M and N are K and L respectively. If A is also a natural number, then which of the given relations is NOT possible?
    a) K*L=A b) K*A=L c) L*A=K d) None of these

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43. One third of a two-digit number exceeds its one fourth by 7. What is the sum of digits of the number?
    a) 72 b) 84 c) 15 d) 12
44. A number is to be multiplied by the fraction 4/5. But Samir, by mistake multiplied it by 5/4 and obtained the number 81 more than the correct one. What was the original number?
    a) 200 b) 120 c) 180 d) 240
45. In a class of 80 students, 4/5 of them own cars. If 15/16 of them own alto then how many own Alto?
    a) 64 b) 20 c) 60 d) Data Inconsistent
46. In a pair of fractions, fraction A is six times the fraction B and the product of the two fractions is 6/25. What is the value of fraction A?
    a) 3/5 b) 5/6 c) 1/5 d) 6/5
47. Divide the sum of 3/5 and 8/11 by their difference.
    a) -7/73 b) 73/-7 c) 11/15 d) None of these
48. A number is to be multiplied by the fraction 4/5. But Samir, by mistake multiplied it by 5/4 and obtained the number 81 more than the correct one. What was the original number?
    a) 200 b) 120 c) 180 d) 240
49. What is the value of $(10101)_2$ in decimal number system?
    a) 18 b) 20 c) 21 d) 42
50. Write $(625)_{10}$ as a number, in the number system with base 8.