Type1 - Questions based on types of number system

1) The sum of all the natural numbers from 51 to 100 is
   a. 5050   b. 4275   c. 4025   d. 3775   e. none of these

2) The sum of first 20 odd natural numbers is equal to
   a. 210   b. 300   c. 400   d. 420   e. none of these

3) Out of six consecutive natural numbers, if the sum of first three is 27, what is the sum of the other three?
   a. 36   b. 35   c. 25   d. 24   e. none of these

4) If a and b are two distinct natural numbers, which one of the following is true?
   a. Sqrt(a+b) > sqrt(a) + sqrt(b)   b. Sqrt(a+b) = sqrt(a) + sqrt(b)
   b. c. Sqrt(a+b) < sqrt(a) + sqrt(b)   d. ab = 1   e. none of these

5) Which one of the following is a factor of the sum of first 25 natural numbers?
   a. 26   b. 24   c. 13   d. 12   e. none of these

6) The sum of all natural numbers between 100 and 200 which are multiples of three is
   a. 5000   b. 4950   c. 4980   d. 4900   e. none of these

7) If x is a prime number and -1 ≤ (2x – 7) /5 ≤ 1, then the number of values of x is
   a. 4   b. 3   c. 2   d. 5   e. none of these

8) A rational number between 3/4 and 3/8 is
   a. 7/3   b. 16/9   c. 9/16   d. 1/7   e. none of these

Type2-Questions based on unit digits

9) The unit digit in the expansion of $(2137)^{754}$ is
   a. 1   b. 3   c. 7   d. 9   e. none of these

10) The unit digit in the sum of $(124)^{372}$ + $(124)^{373}$ is
    a. 5   b. 4   c. 2   d. 0   e. none of these

11) The unit digit of the expression 25^{6521} + 36^{528} + 73^{54} is
    a. 6   b. 5   c. 4   d. 0   e. none of these

12) The units digit in the product 7^{21} x 6^{61} x 3^{65} is
    a. 1   b. 2   c. 3   d. 4   e. none of these

13) The digit in the unit place of the product $(2464)^{1793}$ x $(615)^{317}$ x $(131)^{491}$ is
    a. 0   b. 2   c. 3   d. 5   e. none of these

14) The digit in the unit's place of the product 81 x 82 x 83 x …. X 89 is
    a. 0   b. 2   c. 6   d. 8   e. none of these

Type3- Questions based on divisibility

15) If the number 48326*8 is divisible by 11, then the missing digit is
    a. 5   b. 3   c. 2   d. 1   e. none of these

16) Which of the following numbers is not divisible by 18?
    a. 54036   b. 50436   c. 34056   d. 65043   e. none of these

17) If a number is divisible by both 11 and 13, then it must be necessarily
    a. Divisible by (11 + 13)   b. divisible by (11 - 13)   c. divisible by (11 x 13)   d. 429   e. none of these

18) How many 3-digit numbers, in all, are divisible by 6?
    a. 140   b. 150   c. 160   d. 170   e. none of these

19) What least number, of 5 digits is divisible by 41?
    a. 10045   b. 10004   c. 10041   d. 41000   e. none of these

20) Which one of the following will completely divide $5^{71} + 5^{72} + 5^{73}$?

a. 150   b. 160   c. 155   d. 30   e. none of these

21) $3^{25} + 3^{26} + 3^{27} + 3^{28}$ is divisible by

a. 11   b. 16   c. 25   d. 30   e. none of these

22) $2^{16} - 1$ is divisible by

a. 11   b. 13   c. 17   d. 19   e. none of these

23) If a and b are two odd positive integers, by which of the following integers is $a^4 - b^4$ always divisible.

a. 3   b. 6   c. 8   d. 12   e. none of these

24) A common factor of $13^7 + 11^7$ and $13^5 + 11^5$ is

a. 24   b. $13^5 + 11^5$ c. $13^2 + 11^2$ d. 2   e. none of these

25) If n be any natural number, then by which largest number $n^3 - n$ is always divisible?

a. 3   b. 6   c. 12   d. 18   e. none of these

26) The smallest number that must be added to 803641 in order to obtain a multiple of 11 is

a. 1   b. 4   c. 7   d. 9   e. none of these

27) The least number, which is to be added to the greatest number of 4 digits so that the sum may be divisible by 345, is

a. 50   b. 6   c. 60   d. 5   e. none of these

28) Both the ends of digits of a 99 digits number N are 2. N is divisible by 11, then the middle digit is

a. 1   b. 2   c. 3   d. 4   e. none of these

Type4- Questions based on Remainder

29) In a division sum, the divisor is 10 times the quotient and 5 times the remainder. If the remainder is 40, then the dividend is

a. 240   b. 440   c. 4040   d. 4000   e. none of these

30) A number when divided by 280 leaves 115 as remainder. When the same number is divided by 35, the remainder is

a. 15   b. 10   c. 20   d. 17   e. none of these

31) When a number is divided by 36, the remainder is 19. What will be the remainder when the number is divided by 12?

a. 7   b. 5   c. 3   d. 0   e. none of these

32) In a division sum. The divisor is 10 times the quotient and 5 times the remainder. If the remainder is 46, then the dividend is

a. 4236   b. 4306   c. 4336   d. 5336   e. none of these

33) A number divided by 68 gives the quotient 269 and remainder 0. If the same number is divided by 67, the remainder is

a. 0   b. 1   c. 2   d.3   e. none of these

34) A number when divided by the sum of 555 and 445 gives two times their difference as quotient and 30 as the remainder. The number is

a. 220030   b. 22030   c. 1220   d. 1250   e. none of these

35) A number when divided by 5 leaves remainder 3. What is the remainder when square of the same number is divided by 5?

a. 1   b. 2   c. 3   d. 4   e. none of these

36) If two numbers are each divided by the same divisor, the remainders are 3 and 4 respectively. If the sume of the two numbers be divided by the same divisor, the remainder is 2. The divisor is

a. 9   b. 7   c. 5   d. 3   e. none of these

37) 64329 is divided by a certain number, While dividing the numbers, 175, 114 and 213 appear as three successive remainders. The divisor is

a. 184   b. 225   c. 234   d. 296   e. none of these

38) When an integer K is divided by 3, the remainder is 1 and when k+1 is divided by 5, the remainder is 0. Of the following, a possible value of K is

a. 62   b. 63   c. 64   d. 65   e. none of these

39) When n is divided by 5 the remainder is 2. What is the remainder when n^2 is divided by 5?

a. 2   b. 3   c. 1   d. 4   e. none of these

40) 'a' divides 228 leaving a remainder 18. The biggest two digit value of 'a' is

a. 21   b. 35   c. 30   d. 70   e. none of these

41) When 2^{33} is divided by 10 , the remainder will be

a. 2   b. 4   c. 8   d. 3   e. none of these

42) The remainder when 3^{21} is divided by 5 is?

a. 1   b. 2   c. 3   d. 4   e. none of these

43) If 17^{200} is divided by 18, the remainder is

a. 17   b. 16   c. 1   d. 2   e. none of these

Type5- Questions based on interchanging the position of the digits of a number

44) Let d be a two digit number. If half of d exceeds one third of d by the sum of the digits in d, then the sum of the digits in d is

a. 6   b. 8   c. 9   d. 15   e. none of these

45) If a number of two digits is k times the sum of its digits, then the number formed by interchanging the digits is the sum of the digits multiplied by

a. 9 +k   b. 10 +k   c. 11 - k   d. k – 1   e. none of these

46) The difference between a two digit number and the number obtained by interchanging the two digits of the number is 9. What is the difference between the two digits of the number?

a. 3   b. 2   c. 1   d. cannot be determined   e. none of these

47) If the position of the digits of a two digit number are interchanged, the number obtained is smaller than the original number by 27. If the digits of the number are in the ratio of 1 : 2, what is the original number?

a. 36   b. 63   c. 48   d. cannot be determined   e. none of these

48) The number obtained by interchanging the digits of a two digit number is less than the original number by 63. If the sum of the digits of the number is 11, What is the original number?

a. 29   b. 92   c. 74   d. d. cannot be determined   e. none of these

49) In a three digit number, the digit in the unit's place is twice the digit in the ten's place and 1.5 times the digit in the hundred's place. If the sum of all the three digits of the number is 13, what is the number?

a. 364   b. 436   c. 238   d. 634   e. none of these

50) In a two digit number, the digit in the ten's place is four times the digit in unit place and the sum of the digits is equal to ten. What is the number?

a. 14   b. 41   c. 82   d. data inadequate   e. none of these

Type6- Questions based on Even/Odd Numbers

51) The sum of two even numbers is 6 more than twice of the smaller number. If the difference between these two numbers is 6, which is definitely the smaller number?

a. 18   b. 20   c. data provided are nor adequate to answer the question d. 12   d. 14

52) The product of two consecutive even numbers is 3248. Which is the larger number?

a. 58   b. 62   c. 56   d. 60   e. none of these

53) The sum of the squares of the two consecutive even numbers is 6500. Which is the smaller number?

a. 54   b. 52   c. 48   d. 56   e. none of these

54) The product of two consecutive even numbers is 9408. Which is the greater of the two numbers?

a.   96   b. 98   c. 94   d. 92   e. none of these

55) The sum of two odd numbers is 38 and their product is 325. What is three times the larger number?

   a.   42   b. 39   c. 75   d. 72   e. 78

56) The average of four consecutive odd numbers is 36. What is the smallest of these numbers?

   a.   31   b. 35   c. 43   d. 47   e. none of these

57) The sum of five consecutive odd numbers is 575. What is the sum of the next set of the consecutive odd numbers?

   a.   615   b. 635   c. 595   d. cannot be determined   e. none of these

58) The sum of three consecutive odd natural number is 87. The smallest of these numbers is

   a.   29   b. 31   c. 23   d. 27

Miscellaneous

59) Twice the square of a number is six times the other number. What is the ratio of the first number to the second?

   a.   1 : 4   b. 2 : 5   c. 1 : 3   d. cannot be determined   e. none of these

60) Three-fourth of one number is equal to five-sixth of another number. What is the respective ratio of the first number to the second number?

   a.   12:11   b. 11:9   c. 9:10   d. cannot be determined   e. none of these

61) The sum of five numbers is 290. The average of the first two numbers is 48.5 and the average of the last two numbers is 53.5. What is the third number?

   a.   72   b. 84   c. 96   d. 18   e. none of these

62) A number when subtracted by one seventh of itself gives the same value as the sum of al the angles of a triangle. What is the number?

   a.   224   b. 210   c. 140   c. 350   d. 187

63) If the numerator of a fraction is increased by 200% and the denominator is increased by 350%. The resultant fraction is 5/12. What was the original fraction?

   a.   5/9   b. 5/8   c. 7/12   d. 11/12   e. none of these

64) If the numerator of a fraction is increased by 400% and the denominator is increased by 500%. The resultant fraction is 20/27. What was the original fraction?

   a.   9/8   b. 11/12   c. ¾   d. cannot be determined   e. none of these

65) If the numerator of a fraction is increased by 500% and the denominator is increased by 300%. The resultant fraction is $2\frac{4}{7}$. What was the original fraction?

   a.   4/7   b. 12/7   c. 15/4   d. 6/5   e. none of these

66) If the numerator of a fraction is increased by 20% and its denominator by 25%, then the fraction so obtained is 3/5. What is the original fraction ?

   a.   3/5   b. 3/8   c. 5/8   d. cannot be determined   e. none of these

67) The sum of five consecutive numbers is 270. What is the sum of the second and the fifth number?

   a.   108   b. 107   c. 110   d. cannot be determined   e. none of these

68) A certain number of two digits of a two digit number is 12 and the difference between the two digits of the two digit number is 6. What is the two digit number?

   a.   39   b. 84   c. 93   d. cannot be determined   e. none of these

69) Find the positive integer for which the sum of the number and its reciprocal is 17/4

   a.   6   b. 8   c. 4   d. 2   d. none of these

70) A number whose one fourth part is increased by 5 is equal to the third part diminished by 5 is

   a.   100   b. 80   c. 60   d. 120   e. none of these

71) A number consists of 3 digits whose sum is 10. The middle digit is equal to the sum of the other two and the number will be increased by 99. If its digit are reversed , then find the number.

   a.   352   b. 253   c. 145   d. 350   e. none of these

72) Two numbers are such that the square of greater one is 504 less than 8 times the square of the other. If the numbers are in the ratio 3 : 4, then find the number.

    a. 15 and 20   b. 6 and 8   c. 12 and 16   d. 9 and 12   e. none of these

73) $[3 - 4 (3 - 4)^{-1}]^{-1}$ is equal to

    a. 7   b. -7   c. 1/7   d. $-\dfrac{1}{7}$

74) The number 0.121212.......... in the form p/q is equal to

    a. 4/11   b. 2/11   c. 4/33   d. 2/33

75) $0.\overline{001}$ is equal to

    a. 1/1000   b. 1/999   c. 1/99   d. 1/9

Answer Key:

1. d	2. c	3. a	4. c	5. c	6. b	7. d	8. c	9. d	10. d	11. d	12. d	13. a	14. a	15. d
16. d	17. c	18.	19. b	20. c	21. d	22. c	23. c	24. a	25. b	26. c	27. b	28. d	29. c	30. b
31.	32. d	33.b	34.a	35. d	36. c	37. c	38. c	39. d	40. d	41. a	42. c	43. c	44. c	45. c
46. c	47. b	48. b	49. b	50. c	51. c	52. a	53. d	54. b	55. c	56. e	57. d	58. d	59. d	60. e
61. e	62. b	63. b	64. e	65. b	66. c	67. e	68. c	69. c	70. d	71. b	72. d	73. c	74. c	75. b