Number System

1. What is the unit digit is the product of $207 \cdot 781 \cdot 39 \cdot 94$

(a) 9 (b) 1

(c) 7 (d) 2

2. What will came in place of unit digit in the value of $(17)^{35} \cdot (83)^{71} \cdot (111)^{55}$?

(a) 0 (b) 3

(c) 1 (d) 6

3. Find the number of zeros at the end of $1 \times 2 \times 3 \times 4 \times 5 \times 6$ ..... $\times 99 \times 100$?

(a) 22 (b) 24

(c) 26 (d) 28

4. Find the number of zeros at the end of $2 \times 4 \times 6 \times 8 \times 10 \times$ ..... $\times 98 \times 100$

(a) 10 (b) 11

(c) 12 (d) 15

5. Find the number of zeros at the end of $10 \times 20 \times 30 \times$ ..... $\times 2000$

(a) 222 (b) 249

(c) 226 (d) 220

6. Find the number of factor of 100.

(a) 8 (b) 9

(c) 10 (d) 12

7. Find the number of factor of 80.

(a) 10 (b) 12

(c) 6 (d) 8

8. Find the sum of factor of 100.

(a) 127 (b) 217

(c) 219 (d) 189

9. Find the sum of factor of 50.

(a) 92 (b) 93

(c) 97 (d) 91

10. Find the average of factor 60.

(a) 12 (b) 13

(c) 14 (d) 16

11. Find the product of factor of 100.

(a) 10^9 (b) $10^{9/2}$

(c) $10^{11/2}$ (d) 10^{19}

12. How many 3 digit numbers are completely divisible by 6?

(a) 149 (b) 150

(c) 151 (d) 166

13. How many 3 digit numbers are completely divisible by 3 and 4.

(a) 67 (b) 75

(c) 57 (d) 83

14. What will be the remainder when 17^{200} is divided by 18?

(a) 17 (b) 16

(c) 1 (d) 2

15. What will be the remainder when $(67^{67} + 67)$ is divide by 68?

(a) 1 (b) 66

(c) 67 (d) 60

16. Which of the following number will completely divide $(49^{15} - 1)$?

(a) 8 (b) 14

(c) 51 (d) 50

17. A number when divided by 6 leaves a remainder 3. When the square of the number is divided by 6, the remainder is:

(a) 0 (b) 1

(c) 3 (d) 2

18. A number when divided successively by 4 and 5 leaves remainder 1 and 4 respectively. when it is sucessively divided by 5 and 4, then the respective remainder will be:

(a) 1, 2 (b) 2, 3

(c) 3, 2 (d) 4, 1

19. A number was divided successively in order by 4, 5, and 6. The remainder were respectively 2, 3 and 4. The number is–

(a) 214 (b) 476

(c) 954 (d) 1908

20. Which one of the following numbers will completely divide $(4^{61} + 4^{62} + 4^{63} + 4^{64})$

(a) 3 (b) 9

(c) 11 (d) 17

21. Which one of the following number will completely divide $5^{51} + 5^{52} + 5^{53}$

(a) 11 (b) 12

(c) 31 (d) 32

22. Which one of the following is the common factor of $(47^{43} + 43^{43})$ and $(47^{47} + 43^{47})$.

(a) 47 – 43 (b) 47 + 43

(c) $47^{43} + 43^{43}$ (d) $47^{47} + 43^{47}$

23. Which one of the following number is completely divisible by 99.

(a) 3572 (b) 13595
(c) 913464 (d) 114345

24. Which one of the following number is completely divisible by 45.

(a) 181560 (b) 331145
(c) 202860 (d) 203350

25. If a number is divided by 84 the remainder is 37. What will be the remainder if it is divided by 21.

(a) 16 (b) 18
(c) 12 (d) 9

26. The sum of both digits of a two digit number is 7. If the digits of the number are inter changed, the number so formed is greater than the original number by 27 find the original number.

(a) 29 (b) 25
(c) 79 (d) 32
(e) None of these

27. Find the largest number of five digits which is divisible by 17.

(a) 99999 (b) 99960
(c) 99994 (d) 10013

28. Which one of the following is a prime number?

(a) 15 (b) 31
(c) 21 (d) 9

29. Which is the grealist out of the following numbers

(a) $(2+2+2)^2$ (b) $\left[(2+2+2)^2\right]^2$
(c) $(2+2+2)^3$ (d) 4^3

30. The digit in the blank space of the number $34*7$ so that the number is divisible by 11 will be

(a) 3 (b) 6
(c) 7 (d) 8

31. If $a*b = a^2 + b^2$ then $-3*5$ is equal to

(a) 16 (b) 34
(c) 8 (d) 15

32. If there sum of a number of two digits and a number formed by reversing the digit is 99, then what is the sum of the digits of the original number.

(a) 9 (b) 81
(c) 11 (d) 18

33. If there sum of a number of two digits and a number formed by reversing the digit is N, Which one of the following number will completely divide N

(a) 9 (b) 81
(c) 11 (d) 18

34. If there differance of a number of two digits and a number formed by reversing the digit is N, Which one of the following number will completely divide N

(a) 9 (b) 81
(c) 11 (d) 18

35. If there differance of a number of two digits and a number formed by reversing the digit is 45, then what is the differance of the digits of the original number.

(a) 9 (b) 81
(c) 5 (d) 18

36. A number being successively divided by 9, 11 and 13 leaves, 8, 9 and 8 as remainders respectiviely. If the order of divisors is reversed than remainders will be.

(a) 8, 9, 8 (b) 9, 8, 8
(c) 10, 1, 6 (d) 10, 8, 9

37. A 4 digit number is formed by repeating 2-digit number such as 2525, 3232 etc. Any number of this form is always divisible by.

(a) 11 (b) 7
(c) 13 (d) 101

38. $7^{12} - 4^{12}$ is exactly divisibly by which of the following.

(a) 36 (b) 35
(c) 34 (d) 33

39. Find the sum of first fifty natural numbers.

(a) 1144 (b) 1275
(c) 1325 (d) 1075

40. Find the value of
51+52+53+54+……+100

(a) 2443 (b) 1754
(c) 2673 (d) 3775

41. Find the sum of square of 1st 30 natural numbers.

(a) 9455 (b) 8372
(c) 7849 (d) 6973

42. Find the value of.
$2^2+4^2+6^2+8^2+\ldots\ldots+20^2$
(a) 2870 (b) 1321
(c) 1540 (d) 1550

43. Find the value of.
$1^2+3^2+5^2+7^2+\ldots\ldots\ldots\ldots+19^2$
(a) 1335 (b) 1330
(c) 1332 (d) 1334

44. If $1^2+2^2+3^2+4^2+\ldots\ldots\ldots +10^2= 385$ then find the value of $2^2+4^2+6^2+\ldots\ldots +20^2$
(a) 1250 (b) 1540
(c) 1190 (d) 1375

45. Find the value of.
$11^2+12^2+13^2+14^2+\ldots\ldots\ldots\ldots+20^2$
(a) 2870 (b) 2485
(c) 2670 (d) 2495

46. Find the sum of cube of first 20 natural numbers
(a) 24200 (b)44100
(c) 22700 (d) 21500

47. Find the value of,
$1^3+3^3+5^3+7^3+\ldots\ldots\ldots\ldots..+29^3$
(a) 36100 (b) 101025
(c) 32500 (d) 44700

48. If $1^3+2^3+3^3+4^3+\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots+10^3$ $=3025$ the find the value of $2^3+4^3+6^3+\ldots.+20^3$.
(a) 2875 (b) 24200
(c) 3080 (d) 39400

49. Find the sum of all even numbers upto 100.
(a) 2295 (b) 2425
(c) 2495 (d) 2550

50. Find the sum of first twenty even number:-
(a) 290 (b) 420
(c) 650 (d) 780

51. Find the sum of Ist twenty five odd number.
(a) 375 (b) 525
(c) 475 (d) 625

52. Find the sum of all odd number upto 100.
(a) 2100 (b) 2500
(c) 2300 (d) 2200

53. Find the number of prime factores of $6^{20} \cdot 11^{11} \cdot 21^{21}$.
(a) 83 (b) 93
(c) 103 (d) 113

54. Find the number of prime factores of $14^{14} \cdot 15^{15}$.
(a) 48 (b) 58
(c) 68 (d) 78

55. What will be the remainder when $(27^{27}+17^{27})$ is divide by 11?
(a) 27 (b) 17
(c) 0 (d) 1

56. If n is a natural number, then $(6n^2+6n)$ is always divisible by:
(a) 6 only (b) 6 and 12 both
(c) 12 only (d) by 18 only

57. If n is a natural number, then (n^3-n) is always divisible by:
(a) 6 only (b) 6 and 12 both
(c) 12 only (d) by 18 only

58. (x^n-a^n) is completely divisible by $(x-a)$, when
(a) n is any natural number
(b) n is an even natural number
(c) n is an odd natural number
(d) n is prime

59. (x^n-a^n) is completely divisible by $(x+a)$, when
(a) n is any natural number
(b) n is an even natural number
(c) n is an odd natural number
(d) n is prime

60. (x^n+a^n) is completely divisible by $(x+a)$, when
(a) n is any natural number
(b) n is an even natural number
(c) n is an odd natural number
(d) n is prime

61. If a and b are odd numbers, then which of the folloowing is even?
(a) $a+b$ (b) $a+b+1$
(c) ab (d) $ab+2$

62. Which one of the following is a prime number?
(a) 161 (b) 221
(c) 373 (d) 437

63. Which one of the following is a prime number?
(a) 119 (b) 187
(c) 247 (d) 71

64. Find the largest number of five digits which is

divisible by 91.

(a) 99921 (b) 99918

(c) 99981 (d) 99971

65. Find the largest number of four digits which is divisible by 88.

(a) 9944 (b) 9768

(c) 9988 (d) 8888

66. $(51 + 52 + 53 + ...100) = ?$

(a) 2525 (b) 2975

(c) 3225 (d) 3775

67. If a number is divided by 56 the remainder is 29. What will be the remainder if it is divided by 8.

(a) 4 (b) 5

(c) 6 (d) 7

68. If a number is divided by 111 the remainder is 31. What will be the remainder if it is divided by 37.

(a) 31 (b) 32

(c) 33 (d) 0

69. Which one of the following number will completely divide $3^{31} + 3^{32} + 3^{33} + 3^{34}$

(a) 11 (b) 16

(c) 25 (d) 30

70. On multiplying a number by 7, the product is a number each of whose digits is 3. The smallest such number is:

(a) 47619 (b) 47719

(c) 48619 (d) 47649

Final Answers Sheet

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