

Q1. The G.C.D. of 1.08, 0.36 and 0.9 is:

- (a) 0.03 (b) 0.9 (c) 0.18 (d) 0.108

Q2. The H.C.F. of two numbers is 23 and the other two factors of their L.C.M. are 13 and 14. The larger of the two numbers is:

- (a) 276 (b) 299 (c) 322 (d) 345

Q3. Six bells commence tolling together and toll at intervals of 2, 4, 6, 8, 10 and 12 seconds respectively. In 30 minutes, how many times do they toll together ?

- (a) 4 (b) 10 (c) 15 (d) 16

Q4. Three numbers are in the ratio of 3 : 4 : 5 and their L.C.M. is 2400. Their H.C.F. is:

- (a) 40 (b) 80 (c) 120 (d) 200

Q5. The product of two numbers is 1587. If the H.C.F. of these numbers is 23, then the greater number is:

- (a) 23 (b) 115 (c) 92 (d) None of these

Q6. The product of two numbers is 3468 and their H.C.F. is 17. The number of such pairs is:

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

Q7. A, B and C start at the same time in the same direction to run around a circular stadium. A completes a round in 252 seconds, B in 308 seconds and C in 198 seconds, all starting at the same point. After what time will they again be at the starting point ?

- (a) 26 minutes and 18 seconds (b) 42 minutes and 36 seconds
(c) 45 minutes (d) 46 minutes and 12 seconds

Q8. Three numbers which are co-prime to each other are such that the product of the first two is 551 and that of the last two is 1073. The sum of the three numbers is:

- (a) 75 (b) 81 (c) 85 (d) 89

Q9. The LCM of two numbers is 864 and their HCF is 144. If one of the numbers is 288, the other number is:

- (a) 576 (b) 1296 (c) 432 (d) 144

Q10. The HCF and LCM of two numbers are 13 and 455 respectively. If one of the numbers lies between 75 and 125, then, that number is:

- (a) 78 (b) 91 (c) 104 (d) 117

Q11. The L.C.M. of two numbers is 48. The numbers are in the ratio 2 : 3. Then sum of the numbers is:

- (a) 28 (b) 32 (c) 40 (d) 64

Q12. If the sum of two numbers is 55 and the H.C.F. and L.C.M. of these numbers are 5 and 120 respectively, then the sum of the reciprocals of the numbers is equal to:

- (a) $\frac{55}{601}$ (b) $\frac{601}{55}$ (c) $\frac{11}{120}$ (d) $\frac{120}{11}$

Q13. The greatest number of four digits which is divisible by 15, 25, 40 and 75 is:

- (a) 9000 (b) 9400 (c) 9600 (d) 9800

Q14. The greatest number which on dividing 1657 and 2037 leaves remainders 6 and 5 respectively, is:

- (a) 123 (b) 127 (c) 235 (d) 305

Q15. Find the greatest number that will divide 43, 91 and 183 so as to leave the same remainder in each case.

- (a) 4 (b) 7 (c) 9 (d) 13

Q16. The least multiple of 7, which leaves a remainder of 4, when divided by 6, 9, 15 and 18 is:

- (a) 74 (b) 94 (c) 184 (d) 364

Q17. The least number which should be added to 2497 so that the sum is exactly divisible by 5, 6, 4 and 3 is:

- (a) 3 (b) 13 (c) 23 (d) 33

Q18. The least number which when divided by 5, 6, 7 and 8 leaves a remainder 3, but when divided by 9 leaves no remainder, is:

- (a) 1677 (b) 1683 (c) 2523 (d) 3363

Q19. The smallest number which when diminished by 7, is divisible 12, 16, 18, 21 and 28 is:

- (a) 1008 (b) 1015 (c) 1022 (d) 1032

Q20. If $(-3)^{m+1} \times (-3)^5 = (-3)^7$, then the value of m is:

- (a) 5 (b) 7 (c) 1 (d) 3

Q21. Find the multiplicative inverse of 5^{-3} .

- (a) 5^3 (b) $\frac{1}{5}$ (c) 5^2 (d) 5^{-2}

Q22. Which of the following is the value of $(4/5)^{-9} / (4/5)^{-9}$?

- (a) $(4/5)^{18}$ (b) $4/5$ (c) 1 (d) $(5/4)^9$

Q23. Which of the following is the standard form of 0.00001275?

- (a) 1.275×10^{-5} (b) 1.275×10^5 (c) 127.5×10^{-7} (d) 127.5×10^7

Q24. $[(1/2)^{-1} + (2/3)^2 - (3/4)^0]^{-2}$ is equal to:

- (a) $81/484$ (b) $81/169$ (c) $169/81$ (d) $16/81$

Q25. If $a \neq 0$, then the value of a^0 is

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

Q26. In a division sum, the divisor is 10 times the quotient and 5 times the remainder. If the remainder is 46, what is the dividend ?

- (a) 4236 (b) 4306 (c) 4336 (d) 5336 (e) None of these

Q27. What least number must be subtracted from 13601, so that the remainder is divisible by 87 ?

- (a) 23 (b) 31 (c) 29 (d) 37 (e) 49

Q28. 476 ** 0 is divisible by both 3 and 11. The non-zero digits in the hundred's and ten's places are respectively:

- (a) 7 and 4 (b) 7 and 5 (c) 8 and 5 (d) None of these

Q29. Which of the following numbers will completely divide $(49^{15} - 1)$?

- (a) 8 (b) 14 (c) 46 (d) 50

Q30. On dividing 2272 as well as 875 by 3-digit number N, we get the same remainder. The sum of the digits of N is:

- (a) 10 (b) 11 (c) 12 (d) 13

Q31. When a number is divided by 13, the remainder is 11. When the same number is divided by 17, then remainder is 9. What is the number?

- (a) 339 (b) 349 (c) 369 (d) Data inadequate

Q32. If the number 42573 * is exactly divisible by 72, then the minimum value of * is:

- (a) 4 (b) 5 (c) 6 (d) 7 (e) 8

Q33. n is a whole number which when divided by 4 gives 3 as remainder. What will be the remainder when $2n$ is divided by 4 ?

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

Q34. The sum of the two numbers is 12 and their product is 35. What is the sum of the reciprocals of these numbers?

- (a) $12/35$ (b) $1/35$ (c) $35/8$ (d) $7/32$

Q35. What will be remainder when 17^{200} is divided by 18 ?

- (a) 17 (b) 16 (c) 1 (d) 2

Q36. Which one of the following is a prime number ?

- (a) 119 (b) 187 (c) 247 (d) 551 (e) None of these

Q37. The sum of how many terms of the series $6 + 12 + 18 + 24 + \dots$ is 1800 ?

- (a) 16 (b) 24 (b) 20 (c) 18 (e) 22

Q38. Find the remainder when 38^{138} is divided by 39?

- (a) 1 (b) 38 (c) 7 (d) None of these

Q39. Find the remainder when 3^{396} is divided by 14?

- (a) 13 (b) 11 (c) 2 (d) 1

Q40. Find the remainder when 3^{87} is divided by 4?

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

Q41. Find the remainder when 2^{185} is divided by 33?

- (a) -1 (b) 1 (c) 32 (d) 0

Q42. Find the remainder when 2^{187} is divided by 33?

- (a) 4 (b) -4 (c) 37 (d) None of these

Q43. Find the remainder when 2^{410} is divided by 17?

- (a) 4 (b) 13 (c) 1 (d) 16

Q44. Find the remainder when 7^{777} is divided by 28?

- (a) 1 (b) 7 (c) 26 (d) 27

Q45. Find the remainder when 3^{159} is divided by 30?

- (a) 1 (b) 27 (c) 29 (d) None of these

Q46. Find the remainder when 5^{160} is divided by 20?

- (a) 1 (b) 15 (c) 19 (d) 0

Q47. Find the Euler number of 420?

- (a) 70 (b) 90 (c) 96 (d) 419

Q48. Find the Euler number of 25?

- (a) 1 (b) 2 (c) 20 (d) 24

Q49. Find the Euler number of 37?

- (a) 1 (b) 36 (c) 28 (d) None of these

Q50. Find the remainder when 11^{62} is divided by 7?

- (a) 1 (b) 2 (c) 6 (d) 0

Q51. Find the remainder when 69^{282} is divided by 29?

- (a) 1 (b) 5 (c) 0 (d) 28

Q52. Find the remainder when 97^{97} is divided by 10?

- (a) 1 (b) 7 (c) 9 (d) 0

Q53. Find the remainder when 39^{128} is divided by 25?

- (a) 1 (b) 5 (c) 6 (d) None of these

Q54. Find a least number when divided by 11 leaves a remainder of 7, same number when divided by 9 leaves a remainder of 2 ?

- (a) 29 (b) 35 (c) 58 (d) None of these

Q55. Find the remainder when 2^{90} is divided by 91?

- (a) 64 (b) 90 (c) Data insufficient (d) None of these

Q56. Find the remainder when 97^{97} is divided by 10?

- (a) 1 (b) 7 (c) 9 (d) 0

Q57. Find the remainder when 2^{5600} is divided by 153?

- (a) 103 (b) 152 (c) 0 (d) 4

Q58. Find the remainder when 347^{347} is divided by 100?

- (a) 12 (b) 13 (c) 99 (d) 63

Q59. Find a least number when divided by 13 leaves a remainder of 11, same number when divided by 17 leaves a remainder of 9 ?

- (a) 29 (b) 35 (c) 58 (d) None of these

Q60. How many trailing zeroes (zeroes at the end of the number) does $60!$ have?

- (a) 14 (b) 12 (c) 10 (d) 8

Q61. What is the highest power of 12 that divides $54!$?

- (a) 25 (b) 26 (c) 30 (d) 4

Q62. Find the unit digit in $1! + 2! + 3! + 4! + \dots + 50!$

- (a) 1 (b) 3 (c) 5 (d) 8

Q63. Find the unit digit in $1! + 2! + 3! + 4! + \dots + 99!$

(a) 7 (b) 3 (c) 1 (d) 0

Q64. Find the value of $\frac{7!}{5!3!}$

(a) 7 (b) 6 (c) 5 (d) 4

Q65. Find the number of zeroes present at the end of 100!

(a) 10 (b) 20 (c) 24 (d) 50

Q66. Find the highest power of 30 in 50!

(a) 10 (b) 11 (c) 12 (d) None of these

Q67. How many natural numbers 'n' are there, such that 'n' ends with exactly 30 zeroes?

(a) 0 (b) 1 (c) 3 (d) 4

Q68. The number 2006! is written in base 22. How many zeroes are there at the end?

(a) 450 (b) 500 (c) 199 (d) 200

Q69. Find the remainder when $1! \times 2! \times 3! \times 4! \dots \times 100!$ is divided by 24 ?

(a) 0 (b) 1 (c) 2 (d) 23

Q70. Find the remainder when $1! + 2! + 3! + 4! \dots + 100!$ is divided by 12?

(a) 0 (b) 9 (c) 11 (d) None of these

Answer key

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