Number System

Practice Exercise

1) Find the number of divisors of 21600?

a) 72 b) 80 c) 56 d) None

2) Find the number even factors of 240?

a) 24 b) 18 c) 16 d) None

3) In how many ways can a number 6084 be written as a product of 2 different factors? ***[Amcat]***

a) 28 b) 27 c) 14 d) 13

4) Find the number of prime factors in the given expression $33^{42} \times 38^{8} \times 51^{10}$?

a) 5 b) 6 c) 3 d) None of these

5) Find the number of prime factors in the given expression $221 \times 77^{4} \times 57^{8} \times 55^{10}$?

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

6) Find the highest power of 5 in 127 ! ?

a) 30 b) 31 c) 32 d) None of these

7) What is the greatest positive power of 5 that divides 30 ! exactly ***[Amcat]***

a) 7 b) 6 c) 3 d) 4

8) If 155 ! is divisible by 5^{n}, then find the maximum value of n.

a) 34 b) 33 c) 35 d) 38

9) Find the number of zeros in the following product $12^{12} \times 13^{13} \times 15^{15} \times 16^{16} \times 20^{20}$

a) 15 b) 35 c) 20 d) 19

10) Find the number of zeros in the following product $1^{1} \times 2^{2} \times 3^{3} \ldots\ldots\ldots \times 50^{50}$

a) 300 b) 350 c) 100 d) None of these

11) Find the number of zeros present at the end of 68! ?

a) 13 b) 14 c) 15 d) 16

12) Find the number of zeros present at the end of 75! ?

a) 20 b) 18 c) 20 d) 19

13) Find the number of zeros in the following product (12 !) $^{13!}$ x (17 !)$^{30!}$

a) (2 x 13!) + (3 x 30!) b) 13! + 17!

c) (2 x 13!) + (30!) d) None of these

14) What is the remainder, when $(200)^{200}$ is divided by 7.

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

15) What is the remainder, when $(571)^{77}$ is divided by 9.

a) 5 b) 3 c) 4 d) 7

16) What is the remainder, when $(58)^{85}$ is divided by 5.

a) 3 b) 2 c) 5 d) 1

17) What will be the remainder when 13^{36} is divided by 2196 ***[Amcat]***

a) 0 b) 2 c) 1 d) 2196

18) The remainder when 7^{84} is divided by 342 is

a) 0 b) 1 c) 49 d) 341

19) What will be the remainder when 13^{36} is divided by 2196 ***[Amcat]***

a) 0 b) 2 c) 1 d) 2196

20) What will be the remainder when $15^{81}+ 16^{81}$ is divided by 31 is ***[Amcat]***

a) 0 b) 2 c) 1 d) 2196

21) What is the remainder when 17^{23} is divided by 16 ***[Amcat]***

a) 15 b) 6 c) 3 d) 1

22) $(7)^{21}$ + $(7)^{22}$ + $(7)^{23}$ + $(7)^{24}$ = N, then what is the remainder when N is divided by 25? ***[TCS]***

a) 2 b) 0 c) 24 d) 9

23) What is the remainder when the given series 1 ! + 2 ! + 3 ! + 4 ! ..... 100 ! is divided by 7 ?

a) 0 b) 5 c) 1 d) 3

24) What is the remainder when 50 ! is divided by 16 ?

a) 0 b) 4 c) 9 d) None of these

25) $(2)^0 + (2)^1 + (2)^2 + (2)^3$ ..... $+ (2)^{20}$ is divided by 7, then what is the remainder?

a) 0 b) 3 c) 5 d) 0

26) What is the unit digit of the given series 1! + 2! + 3! + 4! + 5! + ... 100!

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

27) The last digit of the number obtained by multiplying the numbers 41 x 42 x 43 x 44 x 45 x 46 x 47 x 48 will be

a) 0 b) 8 c) 9 d) 2

28) The last digit of the number obtained by multiplying the numbers 352 x 358 x 773 x 444 x 451 will be

a) 0 b) 8 c) 9 d) 2

29) What is the last digit of $(2012)^{2012}$

a) 2 b) 4 c) 6 d) 8

30) What is the units place of the sum given $(12)^{41} + (66)^{66} + (25)^{15} + (51)^{61} + 4321$

a) 1 b) 5 c) 8 d) 6

31) What is the units place of the sum given $(16)^{12} + (13)^{15} + (17)^{13} + (71)^{69} + 567 + 13$

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

32) What is the last two digits of $(7)^{2012}$

a) 21 b) 61 c) 01 d) 41

33) Find the last two digits of 71^{56747}?

a) 61 b) 01 c) 41 d) 91

34) If 1A64815 is divisible by 3, which of the following will be the value of A?

a) 0 b) 2 c) 7 d) 5

35) If a number 774958A95B is to be divisible by 4 and 9, the value of A and B respectively will be:

a) 7 and 6 b) 7 and 2 c) 8 and 2 d) 6 and 2

36) The digit in the units place of the number represented by $(7^{95} - 3^{58})$ ***[Amcat]***

a) 7 b) 0 c) 6 d) 4

37) The digit in the units place of the number represented by ($8^{43} - 6^{55}$) *[Amcat]*

a) 2 b) 4 c) 0 d) 6

38) Every Sunday Mike jogs 3 miles and for the rest of the week, each day he jogs 1 mile more than the previous day. What is the number of miles mike jogs in 2 weeks *[TCS]*

a) 42 miles b) 84 miles c) 86 miles d) 336 miles

39) The total number of prime factors of the product $(8)^{20} \times (15)^{24} \times (17)^{15}$ *[Amcat]*

a) 59 b) 118 c) 121 d) 123

40) Let P be the product of any three consecutive positive odd integers each of which is less than 146. Then the largest integer dividing all such P is *[TCS]*

a) 6 b) 3 c) 5 d) 15

Check The Answers

1	**A**	6	**B**	11	**C**	16	**A**	21	**D**	26	**D**	31	**A**	36	**D**
2	**C**	7	**A**	12	**B**	17	**C**	22	**B**	27	**A**	32	**C**	37	**D**
3	**C**	8	**D**	13	**A**	18	**B**	23	**B**	28	**D**	33	**D**	38	**B**
4	**A**	9	**B**	14	**A**	19	**C**	24	**A**	29	**C**	34	**B**	39	**D**
5	**D**	10	**B**	15	**D**	20	**A**	25	**A**	30	**B**	35	**B**	40	**D**