1. The difference between the local value and face value of 7 in the numeral 657903 is:

a. 0                 b. 7896            c. 6993                        d. 903

1. The sum of three prime numbers is 100. If one of them exceeds another by 36, then one of the numbers is:

a. 7                 b. 29                c. 41                d. 67

1. The unit’s digit in the product (3127)173  is:

a. 1                 b. 3                  c. 7                  d. 9

1. (51+52+53+………+100) is equal to:

a. 2525           b. 2975            c. 3225                        d. 3775

1. 5b2 is a three-digit number with b as a missing digit. If the number is divisible by 6, the missing digit is:

a. 2                 b. 3                  c. 6                  d. 7

1. How many of the following numbers are divisible by 3 but not by 9?

2133, 2343, 3474, 4131, 5286, 5340, 6336, 7347, 8115, 9276

a. 5                 b. 6                  c. 7                  d. None of these

1. The value of P, when 4864 x 9P2 is divisible by 12, is:

a. 2                 b. 5                  c. 8                  d. None of these.

1. How many of the following numbers are divisible by 132?

264, 396, 462, 792, 968, 2178, 5184, 6336

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

1. The number 311311311311311311311 is:

a. divisible by 3 but not by 11           b. divisible by 11 but not by3 c. divisible by both 3 and 11   d. neither divisible by 3 nor by 11.

1. The largest natural number which exactly divides the product of any four consecutive natural numbers is:

a. 6                 b. 12                c. 24                d. 120

1. The sum of three consecutive odd numbers is always divisible by:

I. 2                   II. 3                 III. 5                IV. 6

a. Only I         b. Only II        c. Only I and II           d. Only II and IV

1. The least number which must be subtracted from 6709 to make it exactly  divisible by 9 is:

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

1. The least number by which 72 must be multiplied in order to produce a multiple of 112, is:

a. 6                 b. 12                c. 14                d. 18

1. On dividing a number by 999, the quotient is 366 and the remainder is 103. The number is:

a. 364724       b. 365387        c. 365737        d. 366757

1. When a number is divided by 31, the remainder is 29. When the same number is divided by 16, what will be the remainder?

a. 11               b. 13                c. 15                d. Data inadequate

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

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

1. If x is a whole number, then x2(x2-1) is always divisible by:

a. 12               b. 24                c. 12-x             d. multiple of 12

1. A number when divided successively in order by 4, 5 and 6. The remainders were respectively 2, 3 and 4. The number is:

a. 214             b. 476              c. 954              d. 1908

1. A number when divided by 3 leaves a remainder 1. When the quotient is divided by 2, it leaves a remainder 1. What will be the remainder when the number is divided by 6?

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

1. A number when divided b the sum of 555 and 445 gives two times their difference as quotient and 30 as the remainder. The number is:

a. 1220                       b. 1250            c. 2 2030         d. 22030

**Answer & Explanations**

1. Ans: c.

(Local value)-(Face value)= (7000-7)=6993.

1. Ans: d

x+(x+36)+y=100 => 2x+y=64

Therefore y must be even prime, which is 2.

Therefore 2x+2=64 => x=31

Third prime number= (x+36)= (31+36)= 67.

1. Ans: c

Unit digit in (3127)173  =  Unit digit in 7173. Now, 74 gives unit digit 1.

Therefore, 7173= (74)43 \* 71. Thus, 7173 gives unit digit 7.

1. Ans: d

(51+52+53+………+100) = (1+2+3+…….+100)- (1+2+3+4+……+50)

= (100\*101)/2  -  (50\*51)/2

= (5050-1275)= 3775.

1. Ans: a

Let the number be 5b2. Clearly, it is divisible by 2.

Now, 5+b+2= (7+b) must be divisible by 3. So, b= 2.

1. Ans:b

Taking the sum of the digits, we have:

S1=9, S2=12, S3=18, S4= 9, S5=21, S6= 12, S7=18, S8=21, S9=15, S10=24.

Clearly S2, S5, S6, S8, S9, S10 are all divisible by 3 but not by 9. So, the number of required numbers= 6.

1. Ans: d

Since 4864 is divisible by 4, so 9P2 must be divisible by 3.

Therefore (11+P) must be divisible by 3.

Therefore least value of P is 1

1. Ans:a.

A number is divisible by 132, if it is divisible by each one of 11, 3 and 4.

Clearly, 968 is not divisible by 3. None of 462 and 2178 is divisible by 4.

Also, 5184 is not divisible by 11.

Each one of remaining 4 is divisible by each one of 11, 3 and 4 and therefore, by 132.

1. Ans: d

Sum of digits= 35 and so it is not divisible by 3.

(Sum of digits at odd places)- (Sum of digits at even places)= 19-16=3, not divisible by 11.

So, the given number is neither divided by 3 nor by 11.

1. Ans: c

Required number= 1\*2\*3\*4=24

1. Ans: b

Let the three consecutive odd numbers be (2x+1), (2x+3) and (2x+5). Their sum = (6x=9)= 3 (2x+3), which is always divisible by 3.

1. Ans: c.

On dividing 6709 by 9, we get remainder= 4

Therefore, required number to be subtracted= 4

1. Ans: c

Required number is divisible by 72 as well as by 112, if it is divisible by their LCM, which is 1008.

Now, 1008 when divided by 72, gives quotient= 14.

Therefore, required number= 14.

1. Ans: c.

Required number= 999\*366+103= (1000-1)\*366+103= 366000-366+103= 365737.

1. Ans: d

Number= (31 \* Q)+ 29. Given data is inadequate.

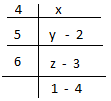
1. Ans: d

Let x=6q+3. Then, x2= (6q+3)2= 36q2+36q+9= 6(6q2+6q+1)+3.

So, when 2n is divided by 4, remainder =3.

1. Ans: a

Putting x=2, we get 22(22-1)= 12. So, x2(x2-1) is always divisible by 12.

1. Ans: a  
   

    Z= 6\*1 +4= 10.

Y= 5z+3= 53

X= 4y+2= 214.

1. Ans: c

Let n=3q+1 and let q= 2p+1. Then, n= 3(2p+1)+1= 6p+4

Therefore, the number when divided by 6, we get remainder= 4

1. Ans: d

Required number = (555+445)\*2\*110+30 = 220000+30= 220030.