

I. Choose the correct answer:

10x1=10

- The number 29 and ____ are twin primes.
 - 31
 - 32
 - 42
- 3753 is divisible by 9 and hence divisible by _____.
 - 10
 - 3
 - 5
- The smallest two digit prime number is _____.
 - 100
 - 98
 - 11
- A number is called an odd number if cannot be grouped equally in _____.
 - threes
 - fours
 - twos
- A natural number having only _____ factors is called a prime number.
 - one
 - three
 - two
- The only even prime number is _____.
 - 4
 - 2
 - 6
- Which of the following is not a prime?
 - 92
 - 97
 - 53
- The HCF of 45 and 75 is _____.
 - 18
 - 10
 - 15
- The least number that should be added to 57 so that the sum is exactly divisible by 2,3,4 and 5 is _____.
 - 8
 - 3
 - 6
- A number is divisible by 10 if it last digit is _____.
 - 3
 - 5
 - zero

II. Say True or False:

5x1=5

- Every natural number is either prime or composite.
- The sum of any number of odd numbers is always even.
- The sum of the factors of 27 is 40.
- The HCF of 17 and 18 is 1.
- The numbers 57 and 69 are coprimes.

III. Match the following:

5x1=5

- | | | |
|-----------------------|---|-----------------------|
| 16. HCF | - | Least Common Multiple |
| 17. Even numbers | - | Highest Common Factor |
| 18. LCM | - | 0,2,4,6,8.... |
| 19. Factors of 12 | - | Last digit is 0 or 5 |
| 20. Divisibility by 5 | - | 1,2,3,4,6,12 |

IV. Fill in the blanks:

5x1=5

- The smallest natural number is _____.
- _____ is a factor of all the numbers.
- The fourth multiple of 5 is _____.
- _____ is the smallest whole number.

25. 27 is divisible by 3 and _____.

V. Answer any six of the following:

6x4=24

- The sum of any three odd natural number is odd. Justify this statement with an example.
- Write the smallest and the biggest digit composite number.
 - Write all the factors of 16.
- If there are 143 math books to be arranged in equal numbers in all the stacks, then find the number of books in each stacks and also the number of stacks.
- Find the dates of any month in a calendar which are divisible by both 2 and 3.
 - Write the biggest two digit prime number.
- Find the prime factorisation of 128 by factor tree method.
- Find the HCF of 36 and 48 by prime factorization method.
- Find the LCM of 15,20,25 using prime factorization method.
- The LCM of two numbers is 6 times their HCF. If the HCF is 12 and one of the numbers is 36, then find the other number.

VI. Solve any four of the following:

4x5=20

- Find the prime factorization of 144 by tree method and division method.
- What is the greatest possible volume of a vessel that can be used to measure exactly the volume of milk in cans (in full capacity) of 80 litres, 100 litres and 120 litres?
- For which of the numbers, from $n = 2$ to 8, is $2n - 1$ a prime?
- There are four mobile phones in a house. At 5 a.m all the four mobile phones will ring together. Thereafter the first one rings every 15 minutes, the second one rings every 20 minutes, the third one rings every 25 minutes and fourth one rings every 30 minutes. At what time, will the four mobile phones ring together again?
- The traffic lights at three different road junctions change after every 40 seconds, 60 seconds and 72 seconds respectively. If they changed simultaneously together at 8 a.m at the junctions, at what time will they simultaneously change together again?
- Wilson, Mathan and Guna can complete one round of circular track in 10, 15 and 20 minutes respectively. If they start together at 6 am from the starting point, at what time will they meet together again at the starting point?

VII. Hots:

1x6=6

- Write your date of birth (Date/Month/year) and check for divisibility by 2,5,10