**Self-Assignment - 1**

**Topic: Progressions**

**Class : 10th Max. Marks : 25**

**ANSWER THE FOLLOWING QUESTIONS 10 × ½ = 5**

1. Find the sum of first 200 natural numbers.
2. Write the General term of G.P.
3. Which of the following is an A.P?
   1. 2,4,8,16,………. C) 6,12,24,48,…………
   2. 1,-1,1,-1,……….. D) √2,2√2,3√2,4√2, ……….
4. Statement A: The nth term of a G.P is 3(0.5)n-1, then common ratio is 0.5

Statement B: The nth term of a G.P is a.rn-1

* 1. Both are true
  2. Both are false
  3. Only A is true
  4. Only B is true

1. In a series an = n2 – 1 then find a17?
2. Find the common difference of the A.P (x – 2y), (x – y), (x),……..
3. Find the A. M of a-2, a, a+2 ?
4. If the 7th term of an A.P is 40. Find the sum of 13 terms of the A.P?
5. In an AP the 3rd term is 5 and 7th term is 9 then what is the common difference.
6. In an A.P first term is ‘a’ and nth term is 'b' then find common difference?

# ANSWER THE FOLLOWING QUESTIONS 4 × 1 = 4M

1. If the common difference of an A.P is 5 then find a18 - a13?
2. Which term of the A.P is 21,18,15,- - - - -81 ?
3. John says “ 1, 1, 1, … are in AP and also in GP “ Do you agree with John?.

Give reason.

1. Make an AP which has ( - 2 ) as the common difference.

# ANSWER THE FOLLOWING QUESTIONS 4 × 2 = 8M

1. In a flower bed, there are 23 rose plants in the first row, 21 in the second row, 19 in the third row and so on. There are 5 rose plants in the last row. How many rows are there in the flower bed?
2. Find the 7th term from the end of the automatic progression 7, 10, 13, . . .

184.

1. Find the 15th term of the A.P -7,-4,-1 ……… 18. How many two digit numbers are divisible by 3?
2. Check whether 301 is a term of the A.P 5, 11, 17, …….?

# ANSWER THE FOLLOWING QUESTIONS 2 × 4 = 8 M

1. Find the sum of the integers between 100 and 500 that are divisible by 9.

Or

The sum of 5th and 9th terms of A.P. is 72 and the sum of 7th and 12th terms is 97. Find the A.P.

1. A manufacturer of TV sets produced 500 sets in the third year and 700 sets in the seventh year. Assuming that the production increase uniformly by a fixed number every year. Find
   1. the production of TV sets in the 15th year
   2. the total production of TV sets in the first 10 years.

Or

If the sum of the first 7 terms of an Arithmetic Progression is 49 and that of first 17 terms is 289, then the first ‘n’ terms.