

# VENKATA RAMANA TUITION CENTRE

## SLIP TEST – 6

Class : 10<sup>th</sup>

Topic : Progressions

Max. Marks : 25

### ANSWER THE FOLLOWING QUESTIONS

$10 \times \frac{1}{2} = 5$

- Find the sum of first 200 natural numbers.
- Write the General term of G.P.
- Which of the following is an A.P?
  - 2,4,8,16,.....
  - 1,-1,1,-1,.....
  - 6,12,24,48,.....
  - $\sqrt{2}, 2\sqrt{2}, 3\sqrt{2}, 4\sqrt{2}, \dots$
- 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  $a.r^{n-1}$ 
  - Both are true
  - Both are false
  - Only A is true
  - Only B is true
- In a series  $a_n = n^2 - 1$  then  $a_{17} = ?$
- Find the common difference of the A.P  $(x - 2y), (x - y), (x), \dots$
- A. M of  $a-2, a, a+2$  is \_\_\_\_\_.
- 0.1, 0.01, 0.001, ..... is \_\_\_\_\_ progression.
- In an AP the 3<sup>rd</sup> term is 5 and 7<sup>th</sup> term is 9 then what is the common difference.
- In an A.P first term is 'a' and n<sup>th</sup> term is 'b' then common difference is \_\_\_\_\_.

**ANSWER THE FOLLOWING QUESTIONS** **$4 \times 1 = 4M$** 

11. If the common difference of an A.P is 5 then find  $a_{18} - a_{13}$ ?
12. Which term of the A.P is 21, 18, 15, - - - -81 ?
13. John says “ 1, 1, 1, ... are in AP and also in GP “ Do you agree with John?  
Give reason.
14. Make an AP which has ( - 2 ) as the common difference.

**ANSWER THE FOLLOWING QUESTIONS** **$4 \times 2 = 8M$** 

15. 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?
16. Find the 7th term from the end of the arithmetic progression 7, 10, 13, . . . 184.
17. Find the 15<sup>th</sup> term of the A.P -7, -4, -1 .....
18. How many two digit numbers are divisible by 3?

**ANSWER THE FOLLOWING QUESTIONS** **$2 \times 4 = 8 M$** 

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

Or

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

20. 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

- A) the production of TV sets in the 15<sup>th</sup> year
- B) 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.