



**ANANDALAYA**  
**Weekly Test 2**  
**Class XI**

Subject: MATHEMATICS  
Date : 27/10/2015

M.M: 25  
Time: 1 Hour

1. How many terms are there in the AP 7, 13, 19,.....205? 1
2. Find the middle term in the expansion of  $\left(x - \frac{1}{2y}\right)^{10}$ . 1
3. Show that:  $6^{1/2} \cdot 6^{1/4} \cdot 6^{1/8} \dots \dots \dots \infty = 6$ . 1
4. The 3<sup>rd</sup> and 6<sup>th</sup> elements of a G.P are 3 and 81 respectively, find the common ratio. 1
5. Find the coefficient of  $x^{30}$  in the expansion of  $(1 + x)^{31}$ . 1
6. Find the sum of all 3-digit numbers which leave the remainder 1 when divided by 6. 4
7. Sum the series  $5 + 55 + 555 + \dots$  to n terms. 4
8. If the 17<sup>th</sup> and 18<sup>th</sup> terms in the expansion of  $(2 + a)^{50}$  are equal, find  $a$ . 4
9. The sum of three numbers which are in G.P, is 56. If we subtract 1, 7, 21 from these numbers in this order, the numbers are in A.P. Find the numbers. 4
10. Sum the series  $3 \times 8 + 6 \times 11 + 9 \times 14 \dots \dots \dots$  to n terms. 4