**ASSIGNMENT NO.-9(SEQUENCES AND SERIES)**

**(MATHEMATICS)**

1. If the $mth$ term of an A.P. be $\frac{1}{n}$ and $nth$ term be $\frac{1}{m}$ ,then show that its $\left(mn\right)th $term is 1.

2. The product of three numbers in A.P. is 224,and the largest number is 7 times the smallest.Find the number.

3. Find the sum of all odd integers between 2 and 100 divisible by 3.

4. If the $mth$ term of an A.P. be $\frac{1}{n}$ and $nth$ term be $\frac{1}{m}$ ,then show that the sum of $mn$ terms is $\frac{1}{2}\left(mn+1\right),$where $m\ne n.$

5. Solve : 1+6+11+16+ …………………..+$x=$148

6. The ratio of the sum of $n $terms of two A.P.’s is $\left(7n+1\right):(4n+27)$.Find the ratio of their $mth$ terms.

7. Find the sum of the series to n terms :

 $\left(i\right) 0.7+0.77+0.777+ ……………. \left(ii\right) 5+5+5.55+5.555+ ……………$

8. If the sum of three numbers in G.P. is 38 and their product is 1728 ,find them.

9. Find four numbers in G.P. whose sum is 85 and product is 4096.

10. Find the sum of n terms of the series $1 . 2^{2}+2 .3^{2}+3 . 4^{2}+ ……………….$