- 1) Find the number of factors of (55N+1)where  $N = 1 + 56 + 56^2 + 56^3 + 56^4 + 56^5 + 56^6$
- 2) Find the number of even factors of 2 x 3,53
- 3) Find the number of factors of N, which are multiples of 12 where  $N = 2^5 \times 3^6 \times 5^3 \times 7^2$
- 4) Find the number of factors of N, which are multiples of 20 where  $N=2^6 \times 3^5 \times 5^4$
- 5) Find the number of even factors of 10008
- 6) Find the sum of all the factors of  $N = 7 \times 11 \times 13^2$
- 7) Find the number of divisory of  $N^2$  which are not the divisory of N. Where  $N=\frac{3}{2}\times\frac{4}{3}$
- 8) Find the sum of all divisors of 7N-1 where  $N=1+8+8+--+8^{15}$
- 9) Find the number of divisors of  $N = 3 \times 5^3 \times 7^4$  which are multiples of 105
- 10) Find the number of divisors of  $N=2^{\frac{1}{2}}\times 3^{\frac{1}{2}}\times 5^{\frac{4}{2}}$  which are of the form 4n+1 (i.e which gives remainder 1 when divided by 4)