DATE : 13/05/2012	**IDEAL TEST SERIES**	MARKS : 30
STD : X	**SUBJECT: ALGEBRA**	TIME :1 HR

Q.1. Attempt any four from the following sub-questions: (4 M)

(1) Find the first four terms of the sequence whose n^{th} term is $3n + 1$.

(2) If 25 is the arithmetic mean between x and 46, then find x.

(3) State whether the following sequence is an Arithmetic Progression or not $1^3, 2^3, 3^3, 4^3,$ ……..

(4) If a = 9 and d = 2, then find the four consecutive terms of Arithmetic Progression

(5) For Geometric Progression a = 3, r = 2 find t_2.

Q.2. Attempt any five sub-questions from the following sub-question. (10 M)

(1) Find S_{10} if a = 6 and d = 3

(2) Find first negative terms from the following Arithmetic Progression 122, 116, 110, …… (Note: $t_n < 0$)

(3) Find the geometric mean of $\sqrt{82}$ - 1 and $\sqrt{82}$ + 1

(4) Find the twenty fifth term of the Arithmetic Progression 12, 16, 20, 24, ………..

(5) Find three consecutive terms of Geometric Progression such that the sum of the first two term is 9 and the product of all three is 216.

(6) Find S_7 of the Geometric Progression 1, 3, 9, ………..

Q.3. Attempt any four from following sub-question. (12)

(1) If S_3 = 31 and S_6 = 3906 then find a and r.

(2) How many two digit numbers leave the remainder 1 when divided by 5.

(3) Babubhai borrows ₹ 400 and agrees to repay with a total interest of ₹ 500 in 10 installments, each installment being less than the preceding installment by ₹ 10. What should be the first and last installment.

(4) Find the sum of all terms given sequence 1, 2+x, 3+x^2, 4+x^3, + ……. n+x^{n-1}

(5) The sum of the first 55 terms of an Arithmetic Progression 3300, find the 28th term.

Q.4. Attempt any one from the following sub-question. (4)

(1) Sachin, Sehwag and Dhoni together scored 228 runs. Their individual scorers are in Geometric Progression Sehwag and Dhoni together scored 12 runs more than Sachin. Find their individual scorers.

(2) In an Arithmetic Progression 7, 14, 21 ……. How many terms are to be considered for getting sum 5740.