Duration: 1 Hour	Total Marks: 30

Instructions: 1) Figures to the right indicate maximum marks.
                2) All questions are compulsory.
                3) Non- scientific calculator is allowed.

Q1. A) For the given series of A.P., 6, 10, 14, 18, ……. find t_6 and S_6.   (4 marks)

    B) If the 5th term of an A.P. is 35 and its 9th term is 59. Find its nth term and sum of n

       terms.   (6 marks)

OR

    X) In the given series of G.P.,2, 10, 50, 250, …….. find t_6 and S_6.   (4 marks)

    Y) The sum of 3 numbers in G.P. is 3.5 and product is 1. Find the numbers   (6 marks)

Q2. A) The sum of 2 nos. is 30. Two times the sum of the numbers exceeds four times the difference between by 10. Find the numbers.   (6 marks)

    B) Using formula method, solve the quadratic equation: $\frac{1}{x} - \frac{1}{x-1} = \frac{1}{3}$ (4 marks)

OR

    X) Solve the equation using substitution method : $2x + 3y = 5$ and $xy = 1$ (6 marks)

    Y) Find the solution to it using elimination method: $2x + 3y = 11$ and $2x - 4y = -24$.   (4 marks)

Q3. A) Find the amount of Rs. 1000 payable at 6% p.a. for 3 years:

    i)   Compounded semi - annually   ii)   Compounded annually   (6 marks)

    B) The simple interest on a certain sum for 1.5 years at 12% p.a. is Rs. 60 less than the simple interest on the same sum for 3 years at 10% p.a. find the sum   (4 marks)

OR

    X) Pranav gets Rs.81,200 after deduction of brokerage on selling a house. If the rate of brokerage is $3\frac{1}{3}$%.Find the brokerage and the cost of the house.   (6 marks)

    Y) What will the compounded interest on Rs. 1000 per 20 years at rate 5% p.a.   (4 marks)