Instructions:

- Assignment should be hand written or typed on A4 page size, with front page having the following details. **(Note: Failing to attach the front page with the following details will result in deduction of 5 marks)**
  Reg. # :_____
  Name : _____
  Course Title : _____
  Section : _____
  Assignment # : _____
  Submitted to : _____
  Date : _____
  (Font size 16, Times New Roman)
- Questions should solve in order as given in assignment.
- No marks for late submission.
- Assignment should be well formatted.
- While solving each question, do show all intermediate steps.

Question 1   **[Marks: 5+5=10]**
[CLO-4]   **[Applying]**
Compute each of the following:

a) $\displaystyle\sum_{k=1}^{5}\sum_{m=6}^{9} 3(2k+7)$

b) $\displaystyle\sum_{i=20}^{110}(2i+i^3)$

Question 2   **[Marks: 2*2=4]**
[CLO-4]   **[Applying]**
Consider the sequence $-2, 1, -1/2, 1/4, \ldots\ldots$.
a) Calculate 30th term of the sequence?
b) Which term of the sequence is $1/34359738368$?

Question 3   **[Marks: 3*2=6]**
[CLO-4]   **[Applying]**
Find the explicit and recursive formula of each following sequence:

a) -31, -14, 3, 20, 37, 54, …

b) 1/5, 1/25, 1/125, 1/625, …