Assignment No. 2: Introduction to Algorithms, Data structures and Algorithm Analysis
Subject: DSA Class:SE(comp) Sem : I

Que-1) Attempt following questions
1) List and explain algorithm design tools. (05 marks)
2) Explain Big Oh, Omega and Theta notations. (04 marks)
3) Define Data Structure. Explain in brief linear, non-linear, persistent, ephemeral, static and dynamic data structure. (06 marks)
4) Write a pseudo code for finding sum of array elements. (05 marks)
5) List characteristics of an algorithm and explain in brief (04 marks)
6) Calculate time complexity of following code- (06 marks)
   
   ```
   for( i = 1;i<=n;i++)
   {
   for(j=1;j<=n;j++)
   {
   a = a +10;
   }
   }
   ```
7) Calculate time complexity of following code- (06 marks)
   
   ```
   for( k = 1;k<=n;k++)
   {
   for( i = 1;i<=n;i++)
   {
   for(j=1;j<=n;j++)
   {
   printf("%d",j);
   }
   }
   ```

Subject Teacher
Mr. S.M.Walunj