

Roll No: _____

Name: _____

Department: **Electrical Engineering**Program: **BS (EE/TE/EL/CE)**

Assignment 2
EL312T Digital Signal Processing

Announced Date: _____ Due Date: _____

Weightage Marks = 03

Teacher Name: **Engr. Fawad Shaukat**

S.No	Course Learning Outcomes	PLOs	Blooms Taxonomy
CLO_2	Analyze linear transforms such as DTFT, DFT and FFT.	PLO_2 (Problem Analysis)	C4 (Analyze)

Q.1: Let $x(n)$ be a finite duration sequence of length 8 such that

$$x(n) = \left\{ \frac{1}{2}, \frac{1}{2}, \frac{1}{2}, \frac{1}{2}, 0, 0, 0, 0 \right\}$$

Evaluate $X(k)$ using Decimation-In-Frequency FFT Butterfly method.Q.2: **Identify** DFT of two real sequences using only one FFT flow graph

$$x_1(n) = \{1, 1, 1, 1\}$$

$$x_2(n) = \{2, 1, 2, 1\}$$
