

Computer Assignment 05

Signals & Systems

April 11, 2019

Instructions

1. No collaborations are allowed
2. Maximum marks: 10

1 DFT and Circular Convolution

Compute and compare the eight point circular convolution for the following sequences $x_1[n]$ and $x_2[n]$ using (a) the circular convolution definition and (b) the DFT method.

$$\begin{aligned}x_1[n] &= \left(\frac{1}{4}\right)^n & 0 \leq n \leq 7 \\x_2[n] &= \cos\left(\frac{3\pi}{8}n\right) & 0 \leq n \leq 7\end{aligned}$$