Logo

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FACULTY OF ENGINEERING

ICHEP – Junior Level – CESS

ECE251: Signals and Systems Fundamentals

Fall 2021

Final MATLAB Project

Submitted to:

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X(t) | E = 0.1J

Chart, bar chart

Description automatically generated

Spectrum of X(t) | E = 0.1J (Parseval’s)

Chart, bar chart, histogram

Description automatically generated

**Spectrum has 4 impulses at the four given frequencies (500,1000,1500,2000)**

Chart, bar chart

Description automatically generatedY1(t) “LPF OUTPUT” | E = 0.048138J

Spectrum of Y1(t) | E =0.048138J (Parseval’s)

Chart, histogram

Description automatically generated

**LPF has cut-off frequency = 1250Hz, therefore only 2 impulses appeared of (500,1000)**

Chart, line chart

Description automatically generatedMagnitude and Phase Response of LPF

Y2(t)”HPF Output”| E = 0.049439J

Chart, bar chart

Description automatically generated

Chart

Description automatically generatedSpectrum of Y2(t) | E = 0.049439J (Parseval’s)

**HPF has cut-off frequency = 1250Hz, therefore only 2 impulses appeared of (1500,2000)**

Magnitude and Phase Response of HPF

Chart, line chart

Description automatically generated

Contribution of Each Student

|  |  |
| --- | --- |
| Student | Requirements Steps |
| Omar Helmy Ibrahim Elbanna (19P3904) | Steps (1:7) |
| Omar Tarek Mohamed Mohamed (19P2772) | Steps (8:13) |
| Shehab Adel Ramadan Moharram (19P4512) | Steps (14:19) |
| Omar Mohamed Abdelmoniem(19P4953) | Steps (20:25) |