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| Lab 05 |  |
| *5* | *OFDM using GNU Radio and MATLAB* |
| **Advanced Wireless Lab** |
| TLEN 5830 |   |
| Advanced Wireless Lab |   |

**GNU-Radio**

Interface GNU-Radio with USRP. Transmit and receive OFDM signal using USRP.

(note: template is not provided as the connections are straight forward)

1. Which block is used to transmit data through USRP? and which block is used to receive signal through USRP?
2. Please provide screen shot of the transmitted waveform and the waveform received at the receiver
3. Explain in brief about each block in the OFDM block diagram. (please refer to the TLEN 5830-AWL Pre-Lab-05 document)

**MATLAB**

1. Please simulate the graph using QPSK modulation
2. Please plot the graph before and after IFFT module