07.10.22

ECE3051 - ELA Task 3

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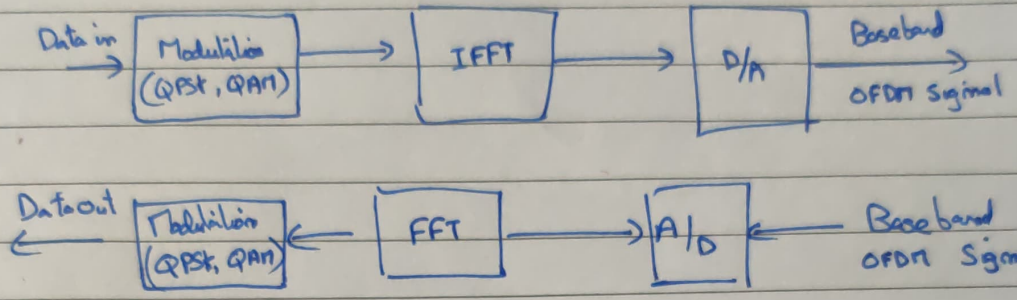
Q: Derive Signals for each block of OFDM System



Some Key Points:

1) Signal Chosen (Discrete Signal called Data in)

$\Rightarrow x(n) = \frac{1}{\pi}\left(2\sin(9\pi n/10) - \sin(8\pi n/10)\right)$

{Over a time period frame of reference t: -50:50.

2) QPSK - Form of Phase Shift Keying in which two bits are modulated at once (QPSK - Quadratic Phase Shift Keying)

QAM - Quadratic Amplitude Modulation

↳ Method of Combining two Amplitude Modulation Signals into a single channel.

3) IFFT & FFT - Compute Inverse Discrete Fourier Transform as well as Discrete Fourier Transform of the i/p.

4) D/A & A/D Converters - Converts Digital to Analog & vice versa from the given i/p signal.