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| Lab-08 |
| *8* | *LTE Sidelink (ProSe, D2D)* |
| **Advanced Wireless Lab** |
| TLEN 5830-AWL |
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1. Map the Sidelink Physical Signals (PSSS & SSSS) and Physical Channels (PSBCH, PSSCH, PSCCH). Describe each signal and channel in a sentence.

1. Simulate the code for the Cell Search and the recovery of Master Information Block (MIB) and System Information Block 1 Recovery.
   1. Explain the role of the Radio Network Temporary Identifiers.
   2. Describe the features of the System Information Block and how it differs from the master Information Block.
   3. Explain the process of Cell Search in a couple of sentences.
2. Explain the importance of Channel estimation and Equalization in the downlink (i.e., “regular eNB 🡪 UE downlink”; no sidelink is involved).

Simulate the code for the channel estimation and equalization.   
Set the Number of Resource Blocks as 75, SNR as 28dB.

* 1. Define the EVM in LTE. Compare the EVM before and after the equalization of the signal in the above simulation output.