INFORMATION THEORY

HOMEWORK # 8:

Please work out the **six** (6) problems stated below – CT refers to the text: Thomas M. Cover and Joy A. Thomsa, *Elements of Information Theory*, Second Edition, John Wiley & Sons, 2006. With this in mind, Problem **2-2** (CT) refers to Exercise 2 for Chapter 2 of CT.

   Show work and **explain** reasoning. Two (2) problems, selected at random amongst these six problems, will be marked.

1.
Solve Problem **7-10** (CT). For Part (b) you need provide only an estimate but you may want to look at the paper by Lovasz (ref. 365).

2.
Solve Problem **7-12** (CT).

3.
Solve Problem **7-13** (CT).

4.
Solve Problem **7-14** (CT).

5.
Solve Problem **7-15** (CT). Use this problem to follow the proof of the Channel Coding Theorem!

6.
Solve Problems **7-35** (CT).