

INFORMATION THEORY

HOMEWORK # 6:

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 **5-8** (CT).

2. \_\_\_\_\_  
Solve Problem **5-9** (CT).

3. \_\_\_\_\_  
Solve Problem **5-16** (CT).

4. \_\_\_\_\_  
Solve Problem **5-25** (CT).

5. \_\_\_\_\_  
Solve Problem **5-39** (CT).

6. \_\_\_\_\_  
Solve Problem **5-43** (CT).

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