Chapter 3:

**3.1: Concept of a Random Variable**

**Definition 3.1**

**Example 3.1**

**Example 3.2**

**3.2: Discrete Probability Distributions**

**Definition 3.4**

**Example 3.8**

**Example 3.9**

**Definition 3.5**

**Example 3.10**

**3.3: Continuous Probability Distributions**

**Definition 3.6**

**Example 3.11**

**Definition 3.7**

**Example 3.12**

**3.4: Joint Probability Distributions**

**Definition 3.8**

**Definition 3.9**

**Example 3.15**

**Definition 3.10**

**Example 3.17**

**Example 3.14**

**Example 3.16**

**Example 3.18**

**Example 3.19**

**Definition 3.12**

**Example 3.21**

**Exercise Questions**

3.5, 3.6, 3.9, 3.13, 3.18, 3.21, 3.26, 3.28, 3.37, 3.38, 3.40 - 3.44, 3.49, 3.50, 3.54, 3.55

**Review Exercise**

All questions related to the topics mentioned above

Chapter 4:

**4.1: Mean of a Random Variable**

**Definition 4.1, Example 4.1, Example 4.3, Theorem 4.1, Example 4.4, Example 4.5, Definition 4.2, Example 4.6, Example 4.7, Theorem 4.2, Example 4.9, Example 4.10, Theorem 4.4, Example 4.13, Example 4.14**

**Exercise**

**4.1-4.4, 4.6, 4.10-4.14, 4.32, 4.33-4.36, 4.49, 4.50**

**Review Exercise**

All questions related to the topics mentioned above

Chapter 5:

**5.2: Binomial and Multinomial Distributions**

**5.3: Hypergeometric Distribution**

**5.5: Poisson Distribution and the Poisson Process**

* **All the examples in the book related to above topics are included**
* **Questions discussed in class and questions from Exercise and review exercise in the book related to above topics are included**

Chapter 6:

**6.1: Continuous Uniform Distribution**

**Example 6.1**

**6.2: Normal Distribution**

**Example 6.2, Example 6.3,** **Example 6.4, Example 6.6, Example 6.7, Example 6.8**

**Exercise**

**6.3-6.9**