**Assignment #3 \_\_\_/32 MARKS**

* You are encouraged to work in groups of 2 or 3 for this assignment
* There are 5 pages to this assignment description
* Due: Friday 11:59pm on Oct 25, 2024
* Submission Instructions:

1. Complete this MS Word document by filling in your answers below.
   1. Name your file as: ***lastname\_firstname\_Assignment\_3*** using one of the member’s name in your group.
   2. Save as PDF
2. For your source code, please zip them up using the name you used above: ***lastname\_firstname\_Assignment\_3\_QX\_Source\_Code.zip,***
3. Submit all files to CourseLink

**Group Members**

Member #1:

First Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_; Last Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Student ID: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Member #2:

First Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_; Last Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Student ID: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Member #3:

First Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_; Last Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Student ID: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Chapter 6.1, Question 3. Provide your answers in the space below. [6 marks]
2. Location of element in list" fails the disjointedness property. Give an example that illustrates this. [2 marks]
3. “Location of element in list" fails the completeness property. Give an example that illustrates this. [2 marks]
4. Supply one or more new partitions that capture the intent of “Location of element in list" but do not suffer from completeness or disjointedness problems. [2 marks]
5. Chapter 6.2, Question 4 [10 marks]
6. Does the partition “Validity of s1" satisfy the completeness property? If not, give a value for s1 that does not fit in any block. [2 marks]
7. Does the partition “Validity of s1" satisfy the disjointedness property? If not, give a value for s1 that fits in more than one block. [2 marks]
8. Does the partition “Relation between s1 and s2" satisfy the completeness property? If not, give a pair of values for s1 and s2 that does not fit in any block. [2 marks]
9. Does the partition “Relation between s1 and s2" satisfy the disjointedness property? If not, give a pair of values for s1 and s2 that fits in more than one block. [2 marks]
10. If the “Base Choice" criterion were applied to the two partitions (exactly as written), how many test requirements would result? [2 marks]
11. Chapter 7.2.2, Question 5. [16 marks]
12. Draw the graph [2 marks]
13. List the test requirements for Edge-Pair Coverage. (Hint: You should get 12 requirements of length 2.) [2 marks]
14. Does the given set of test paths satisfy Edge-Pair Coverage? If not, state what is missing. [2 marks]
15. Consider the simple path [3, 2, 4, 5, 6] and test path [1, 2, 3, 2, 4, 6, 1, 2, 4, 5, 6, 1, 7]. Does the test path tour the simple path directly? With a sidetrip? If so, write down the sidetrip. [2 marks]
16. List the test requirements for Node Coverage, Edge Coverage, and Prime Path Coverage on the graph. [4 marks]
17. List test paths from the given set that achieve Node Coverage but not Edge Coverage on the graph. [2 marks]
18. List test paths from the given set that achieve Edge Coverage but not Prime Path Coverage on the graph. [2 marks]
19. [Bonus] Chapter 7.2.2, Question 8 in the Textbook. [4 bonus marks]