

**UNITED INTERNATIONAL UNIVERSITY (UIU)**

Dept. of Computer Science & Engineering

Trimester: Summer 2024

Course No: CSE 4495 Title: STQA

Section: A Class Test-5

**Time: 20 minutes Marks: 20**

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| **Name** |  | **ID** |  |

1. Consider the following **binarySearch** () function **[8+6+6 = 20]**
2. int binarySearch(int arr[], int l, int r, int x)
3. {
4. while (l <= r) {
5. int mid = (l + r) / 2;
6. if (arr[mid] == x) {
7. return mid;
9. } else if (arr[mid] > x) {
10. r = mid - 1;
12. } else {
13. l = mid + 1;
14. }
15. }
17. return -1;
18. }

a) Draw a CFG for the code snippet.

b) Can you write two test cases that achieves branch coverage?

c) How should you write tests to achieve loop boundary coverage for the loop in lines (4-16)?