EAST WEST UNIVERSITY
Department of Computer Science and Engineering
B.Sc. in Computer Science and Engineering Program
Quiz 2, Fall 2024 Semester

Course: **CSE430, Section 2, Software Quality Assurance and Testing**
Instructor: **Anika Tabassum, Lecturer, CSE Department**
Full Marks: **20 (Will be converted to 10)**
Time: **40 Minutes**

Note: There are **Two** questions, answer ALL of them. The Mark of each question is mentioned at the right margin.

1. #include <stdio.h>   [CO3,C3,
                                                                 Mark:
    void determineQuadrilateralType() {   6+4+4 =
                                                                 14]

    1.   int a, b, c, d, angleSum;
    2.   printf("Enter the four sides and angle sum of the quadrilateral: ");
    3.   scanf("%d %d %d %d %d", &a, &b, &c, &d, &angleSum);

    4.   if (a <= 0 || b <= 0 || c <= 0 || d <= 0) {
    5.   printf("Invalid sides, all sides must be positive.\n");
    6.   return;
    7.   }

    8.   if (angleSum != 360) {
    9.   printf("Invalid quadrilateral, the angle sum must be 360 degrees.\n");
    10.   return;
    11. }

    12. if (a == b && b == c && c == d) {
    13.   if (a == b && angleSum == 360) {
    14.   printf("Square\n");
    15.   } else {
    16.   printf("Rhombus\n");
    17.   }
    18. } else if (a == c && b == d) {

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19.      if (angleSum == 360) {
20.          printf("Rectangle\n");
21.      } else {
22.          printf("Parallelogram\n");
23.      }
24.  } else {
25.      printf("Irregular Quadrilateral\n");
26.  }

27.  if (a > 100 || b > 100 || c > 100 || d > 100) {
28.      printf("This is a large quadrilateral with at least one side > 100.\n");
29.  }

30.  return 0;
31. }
```

a) Find the cyclomatic complexity of the given code using two methods.
b) Find all du pairs, c-use and p-use of the given code.
c) Define the independent paths.

2   You are testing a payment gateway system where: [CO2, C3,
                                                                        Mark: 6]

1. The transaction amount (an integer) must fall within the valid range of $1 to
    $50,000.
        ○ Divide this into three groups:
            ■ Small transactions: $1–$1,000
            ■ Medium transactions: $1,001–$10,000
            ■ Large transactions: $10,001–$50,000
2. The currency type (a string) must be one of the following: "USD" or "EUR".

Design test cases of valid and invalid classes using **Domain Testing Technique**.