EAST WEST UNIVERSITY
Department of Computer Science and Engineering
B.Sc. in Computer Science and Engineering Program
Mid Term Examination, Fall 2024 Semester

Course: **CSE430, Section 2, Software Quality Assurance and Testing**
Instructor: **Anika Tabassum, Lecturer, CSE Department**
Full Marks: **30**
Time: **1 hour**

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

---

1. Suppose you are testing a banking system. Would you choose Effective Software Testing or Exhaustive Software Testing to test your application. Explain the answer with appropriate reasons. [CO2,C3, Mark: 6]

2. Suppose, you are a SQA engineer, you are testing a hospital management system. Do you need validation for this system? If yes, explain the reason. [CO1,C3, Mark: 8]

3. A mobile network provider offers different subscription plans based on the following conditions: [CO2, C3, Mark: 8]

- Monthly Usage:
  - High (more than 50GB of data)
  - Low (less than or equal50GB of data)
- Customer Type:
  - Premium (Customer has been with the provider for more than 2 years)
  - Regular (Customer has been with the provider for 2 years or less)
- Special Offer:
  - Yes (Customer is eligible for a special offer)
  - No (Customer is not eligible for a special offer)

The system follows the following rules while giving discount to the customers:

- ❖ Offer a 50% discount on the subscription fee for monthly usage High and Customer type Premium.
- ❖ Offer a 30% discount on the subscription fee for monthly usage High, Customer is Regular and they have a special offer.

- ❖ Offer a 20% discount on the subscription fee for monthly usage low, the customer is Premium and they have a special offer.
- ❖ No discount (full price) for monthly usage low, customer type regular and no special offer.

Based on the above conditions and actions, create test cases for all possible combinations of conditions **(high or low usage, premium or regular customer, special offer or no offer)** and write down the test cases with expected outcomes using **decision table based testing technique**.

4. Consider a system that accepts a password input with the following rules: [CO2, C3, Mark: 8]

- ➔ Username: Must be between 6 and 20 characters long.
- ➔ The password must be between 8 and 12 characters in length.
- ➔ The password must contain at least one uppercase letter.
- ➔ The password must contain at least one lowercase letter.
- ➔ The password must contain at least one digit.
- ➔ The password must contain at least one special character (e.g., !, @, #, $).

Identify the valid and invalid equivalence classes for each of the input criteria and create test cases that cover all the **equivalence classes**.
