



United International University (UIU)

Dept. of Computer Science & Engineering (CSE)

Mid Exam, Trimester: Summer 2022

Course Code: CSI 321, Course Title: SOFTWARE ENGINEERING

Total Marks: 30, Duration: 1 hour 30 minutes

Any examinee found adopting unfair means will be expelled from the trimester/ program as per UIU disciplinary rules.

(Answer All Questions)

Question # 1:

- Draw UML class diagram for the following scenario using appropriate design pattern:
EA Sports is a game production industry. They are famous for their FIFA game series. Suppose, they launched the game FIFA 22 last year, and this year they want to develop a newer version called FIFA 23 reusing the existing implementation of FIFA 22. Hence, they need to update the squads, add new features, and improve graphics in the new version. (CO2) [6]
- Draw the code review workflow diagram.
Suppose you are building a mobile banking application like Bkash. Due to time constraint, you can either go for beta testing or security testing. Which one will you choose? Support your argument. (CO2) [3+3]
- Consider the following scenario and explain how you will implement MVC:
Suppose you are making the 'My Cart' webpage of an e-commerce website. There is a 'Cart' table in the database. So existing cart items can be retrieved from this table and shown in the webpage. Also, there are add and remove buttons on that page. Clicking on them respectively will add a new item and delete an existing item in the 'Cart' table. (CO2) [6]

Question # 2:

- What's the difference between FRS and testing documentation? (CO1)
Write down technical documentation for the following code snippet:

```
public ArrayList oddsInRange(int lower, int upper){
    ArrayList<Integer> nums = new ArrayList<Integer>();
    for( int i=lower; i++; i<=upper){
        if( i%2 !=0)
            nums.add(i);
    }
    return nums;
}
```

 [2+4]
- What is Microservice architecture? In which type of projects, it can be used?
List down the categories of people found in an ideal software development team and briefly mention their responsibilities (CO1) [2+4]