Fast**National University of Computer & Emerging Sciences, Karachi  
Quiz – II (Spring-2023)**

**Dated: 22 – March - 2023**

|  |  |  |
| --- | --- | --- |
| Student: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Section: \_\_\_\_\_\_\_\_\_ |

**Q1:** online gaming is quite famous among young generation. The main theme for creating such applications is to provide entertainment within your comfort zone. The main idea behind that is the entire game is available over the network and any user can play it once they got the internet access. A game named “BattleYourWay” is such game. Requirements for the game are listed here for your understanding. Any Player can move around the map, including running, jumping, and crouching. Players can select weapons and items such as guns, ammunition, first aid kits, and backpacks. Moreover, it also has a Battle Royale mode where players can compete against each other in a last-man-standing game format. It also has Maps for players to explore, define their strategy and compete accordingly. It also contains a feature for Customization which allow players to customize their character's appearance, weapons, and gear. Leaderboards show the player stats and display them on a leaderboard. The game also supports features like the Multiplayer support, Voice and text chat for players to communicate with each other. Since this application supports a diverse user community so it’s a cross platform application like PC, console or mobile. The game also includes the Anti-cheat measures to prevent cheating and maintain a fair playing field.

Now, state which type of Architectural design is useful for this application and why? Also draw the architecture diagram for that. **[5]**

**Q2.**

1. information hiding is an essential thing in Software application design. How, as a programmer, you will embed it in your application design. Discuss with an example. **[3]**
2. Mention the difference between coupling & cohesion with respect to functional independence in the design concepts.**[2]**