COMSATS UNIVERSITY ISLAMABAD
Abbottabad Campus
Department of Computer Science
FINALTERM EXAMINATION Fall 2024

Class: BSE 6C,BCS (8A ,8B)
Subject: Game Development
Total Time Allowed: 3-hour
Student Name: _____

Date: 13-July-2025
Instructor: Ahsan Khan
Max Marks: 100
Registration #_____

SECTION-A
[Clo-1,Clo-2,Clo-3,clo-4]

Q1. Explain the following **[CLO-1][Marks:20]**

A) **Provide a concise overview of the Unity Game Development Engine. Highlighting its key features such as the Scene View, Game View, Hierarchy Window, Inspector Window, Project Window, and Console Window and advantages for game development**

B) **Explain the purpose and differences between the Start(), Update(), Awake(), OnCollisionEnter(), and OnTriggerEnter() methods in Unity.**

Q2 Suppose you are developing a new game that features a realistic environment. Create a detailed plan for your game, including multiple assets and scenes. In your plan, define materials, shaders, and textures in enhancing the visual quality of your 3D object. Also discuss texture mapping and UV mapping in enhancing the visual quality of your 3D object. **[CLO-2][Marks:20]**

Q3. Imagine you are tasked with creating an animation for a 3D object in a game. Develop a comprehensive plan that outlines the entire process of creating this animation. In your plan, explain the steps involved in animating a 3D object and discuss the major components used in creating 3D animations. **[CLO-3][Marks:20]**

Q4: Imagine you are designing a complex 3D environment **[ClO-03][Marks:20]**

A) **Describe how you would use ProBuilder to create a complex 3D model for a game environment. Discuss the key concepts and tools within ProBuilder that facilitate this process.**

B) **Describe the process of creating a detailed and interactive terrain in Unity. Explain how you would use Unity's terrain tools to sculpt the landscape, paint textures, and add vegetation.**

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Q5: Describe what NavMesh AI is in Unity and explain its components also explain its role in providing pathfinding and navigation .By using Nav Mesh Create a Zombie Runner with the following mechanics also write the script if needed

- **Game Mechanics:**
  - **Make zombie to follow a player when player is in range of zombie**
  - **Implement a Recasting to shoot a zombie**
  - **Health and damage system for zombie**

Explain each step you follow to build this game

[Clo-4][Marks:20]

---------- **Best of Luck !!!!**----------

" "The only limit to your game is your imagination. Keep creating, keep innovating, and let your passion for game development lead you to new heights."



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