5)

a) Explain the process of detecting collisions within Unity in a few sentences. [2 pt]

- Collisions are detected using components such as Box-Colliders and a Rigidbody. The Box Collider component defines a box shaped collision area around the GameObject in Unity, and it provides collision detection and physical interactions for GameObjects. The Rigid Body allows a GameObject to have Unity's Physics engine, enabling realistic physical behaviors like gravity and other features. There is also OnCollisionEnter callback which helps detect collisions in unity.

b) True or False: When the same C# script is added as a component to multiple game objects to detect collisions, each game object detects its own collisions without interfering with the collisions of the other game objects. Justify your answer. [2 pts]

- This is true because each game object has its own instance of the C# script which will detect collisions independently. As long as the game objects have their own components like box colliders or rigidbody.

c) Explain the use of the GetComponent method within Unity. [1 pt]

- GetComponent is a method in Unity that helps get a reference to a component attached to a game object.