Universiti Tun Hussein Onn Malaysia

UNIVERSITI TUN HUSSEIN ONN MALAYSIA

FINAL EXAMINATION
SEMESTER I
SESSION 2021/2022

COURSE NAME	:	COMPUTER GAMES DEVELOPMENT
COURSE CODE	:	BIM 33103
PROGRAMME CODE	:	BIM
EXAMINATION DATE	:	JANUARY / FEBRUARY 2022
DURATION	:	3 HOURS
INSTRUCTION	:	1. ANSWER **ALL** QUESTIONS. 2. THIS FINAL EXAMINATION IS CONDUCTED ONLINE AND CLOSE BOOK

THIS QUESTION PAPER CONSISTS OF **FOUR (4)** PAGES

Q1 Questions **Q1(a)-Q1(e)** are based on **Figure Q1**.

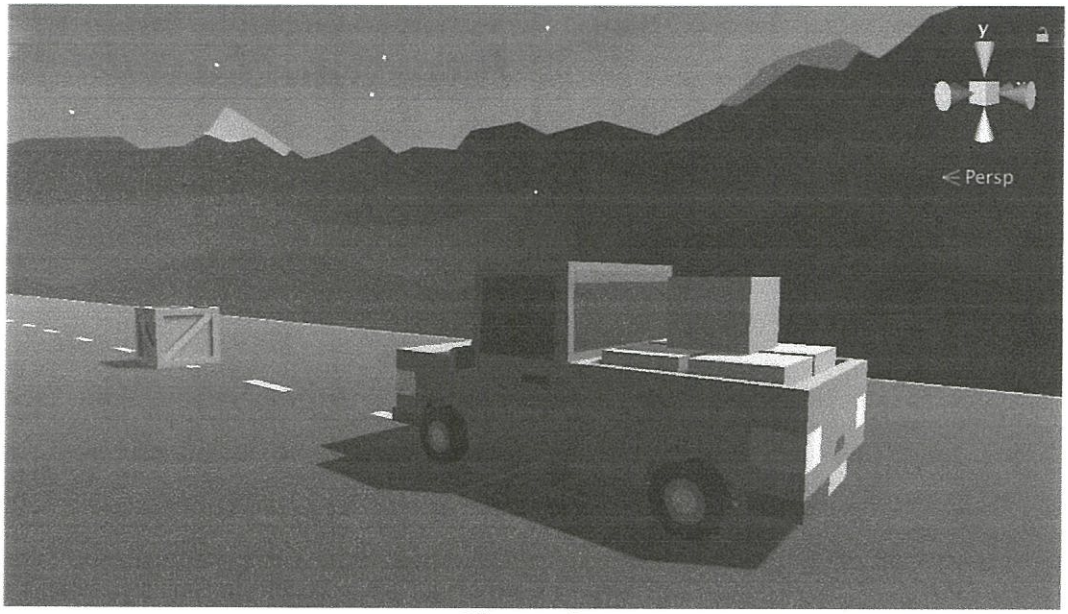

Figure Q1

(a) Write a Unity code to move the vehicle along Z axis.

(4 marks)

(b) Modify the code in **Q1(a)** to change the vehicle's speed.

(4 marks)

(c) Identify **THREE (3)** steps to avoid the vehicle from going right through the obstacle box.

(6 marks)

(d) Write a Unity code to move the camera's position above the vehicle.

(6 marks)

(e) Explain **FIVE (5)** steps in Unity to allow player control on vehicle's movement.

(10 marks)

Q2 Questions **Q2(a)-Q2(b)** are based on the following Unity code in **Figure Q2**.

```
1. Debug.Log(speedUp); }
2. else if (speed > 60) {
3. private string speedUp = "Speed up!";
4. void Update() {
5. Debug.Log(slowDown); }
6. if (speed < 10) {
7. private float speed;
8. private string slowDown = "Slow down!";
9. }
```

Figure Q2

(a) Re-arrange the code in **Figure Q2** in the right order to allow players to control the speed.

(8 marks)

(b) Identify the rules to get the correct order for the code arranged in **Q2(a)**.

(2 marks)

Q3 Questions **Q3(a)-Q3(c)** are based on the following Unity code in **Figure Q3**.

```
private float topBound = 30;
private float lowerBound = -10;
void Update() {
if (transform.position.z > topBound)
{
Destroy(gameObject);
} else if (transform.position.z < lowerBound) {
Destroy(gameObject);
}
}
```

Figure Q3

(a) Explain the function of `Destroy(gameObject)` in **Figure Q3**.

(5 marks)

(b) List **THREE (3)** steps to avoid the game object moves out of bound.

(9 marks)

(c) Define the purpose of `topBound` and `lowerBound` variables in **Figure Q3**.
(6 marks)

Q4 Questions **Q4(a)-Q4(c)** are based on Unity Learn tutorials in **Figure Q4**.

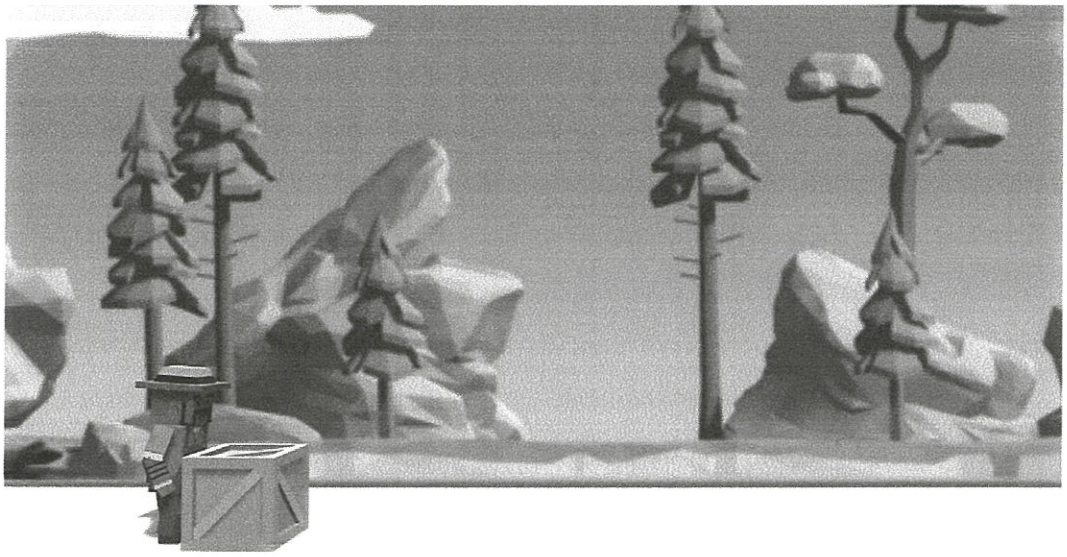

FIGURE Q4

(a) List **FOUR (4)** steps involve to make the game background in **Figure Q4** loops perfectly using a box collider.
(8 marks)

(b) Write the Unity code for the answer in **Q4(b)**.
(6 marks)

(c) Write the Unity code for game over trigger if the player collides with the obstacle.
(6 marks)

- END OF QUESTIONS –