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**UNIVERSITI TUN HUSSEIN ONN MALAYSIA**

**FINAL EXAMINATION  
SEMESTER I  
SESSION 2019/2020**

COURSE NAME : COMPUTER GAMES  
DEVELOPMENT  
COURSE CODE : BIM 33103  
PROGRAMME CODE : BIM  
EXAMINATION DATE : DECEMBER 2019 / JANUARY 2020  
DURATION : 3 HOURS  
INSTRUCTION : ANSWER ALL QUESTIONS

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THIS QUESTION PAPER CONSISTS OF FOUR (4) PAGES

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

- (a) Identify **FIVE (5)** game objects in **Figure Q1** that are considered as foreground elements. (5 marks)
- (b) Propose **ONE (1)** new character to challenge the main character, *Mario* in achieving his goal in the game. (6 marks)
- (c) Illustrate **THREE (3)** action poses appropriate for the new character proposed in **Q1 (b)**. (9 marks)
- (d) Explain **THREE (3)** types of screen which are suitable for the game's user interface. (9 marks)
- (e) Sketch **TWO (2)** isometric views if the gameplay is changed to 3D environment. (8 marks)
- (f) Suggest **THREE (3)** game cutscenes for the sample game in **Figure Q1**. (9 marks)
- (g) Explain **TWO (2)** differences between game cinematics and game cutscenes. (8 marks)
- (h) Justify **TWO (2)** marketing strategies to promote the game in **Figure Q1** on online platform. (6 marks)

**Q2** Questions **Q2(a)**-**Q2(c)** are based on the following Unity code for character collision detection in **Figure Q2**.

```
private var doorIsOpen : boolean = false;
private var doorTimer : float = 0.0;
private var currentDoor : GameObject;

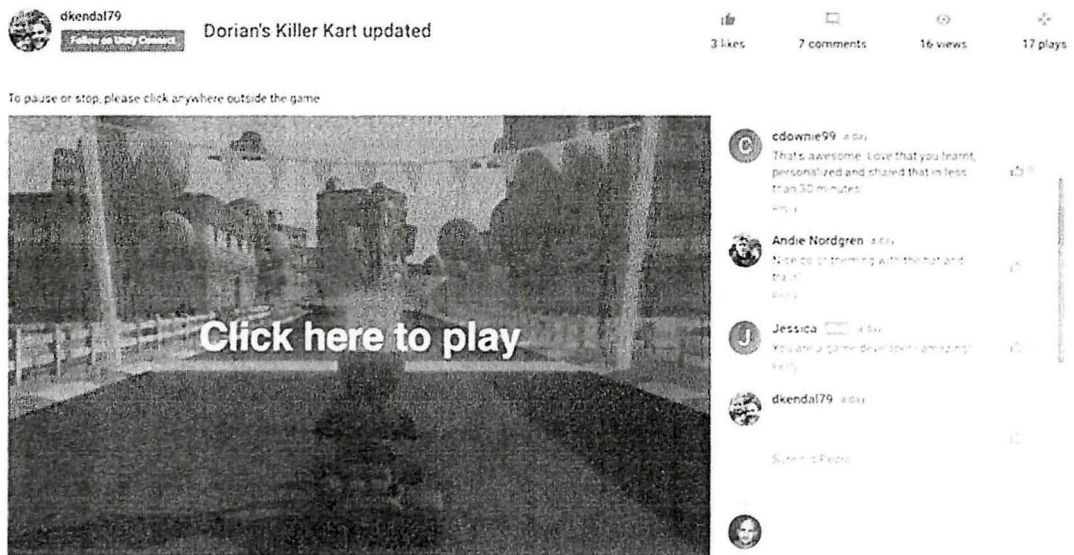
var doorOpenTime : float = 3.0;
var doorOpenSound : AudioClip;
var doorShutSound : AudioClip;
```

**FIGURE Q2**

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- (a) Explain **ONE (1)** function of `currentDoor` game object. (4 marks)
- (b) Explain **TWO (2)** differences between `doorTimer` and `doorOpenTime` variables. (8 marks)
- (c) Write a Unity code for a full collision detection function using `Update()` and `OpenDoor()` functions. (8 marks)

**Q3** Questions **Q3(a)**-**Q3(c)** are based on the given Unity 3D screenshot in **Figure Q3**.



**FIGURE Q3**

- (a) List **TEN (10)** steps to share a Unity game on the web. (10 marks)
- (b) Identify **FIVE (5)** possible file formats for a web-based game in **Q3(a)**. (5 marks)
- (c) Justify **ONE (1)** reason why WebGL is chosen as a default format to share a Unity game on the web. (5 marks)

**TERBUKA** END OF QUESTION –

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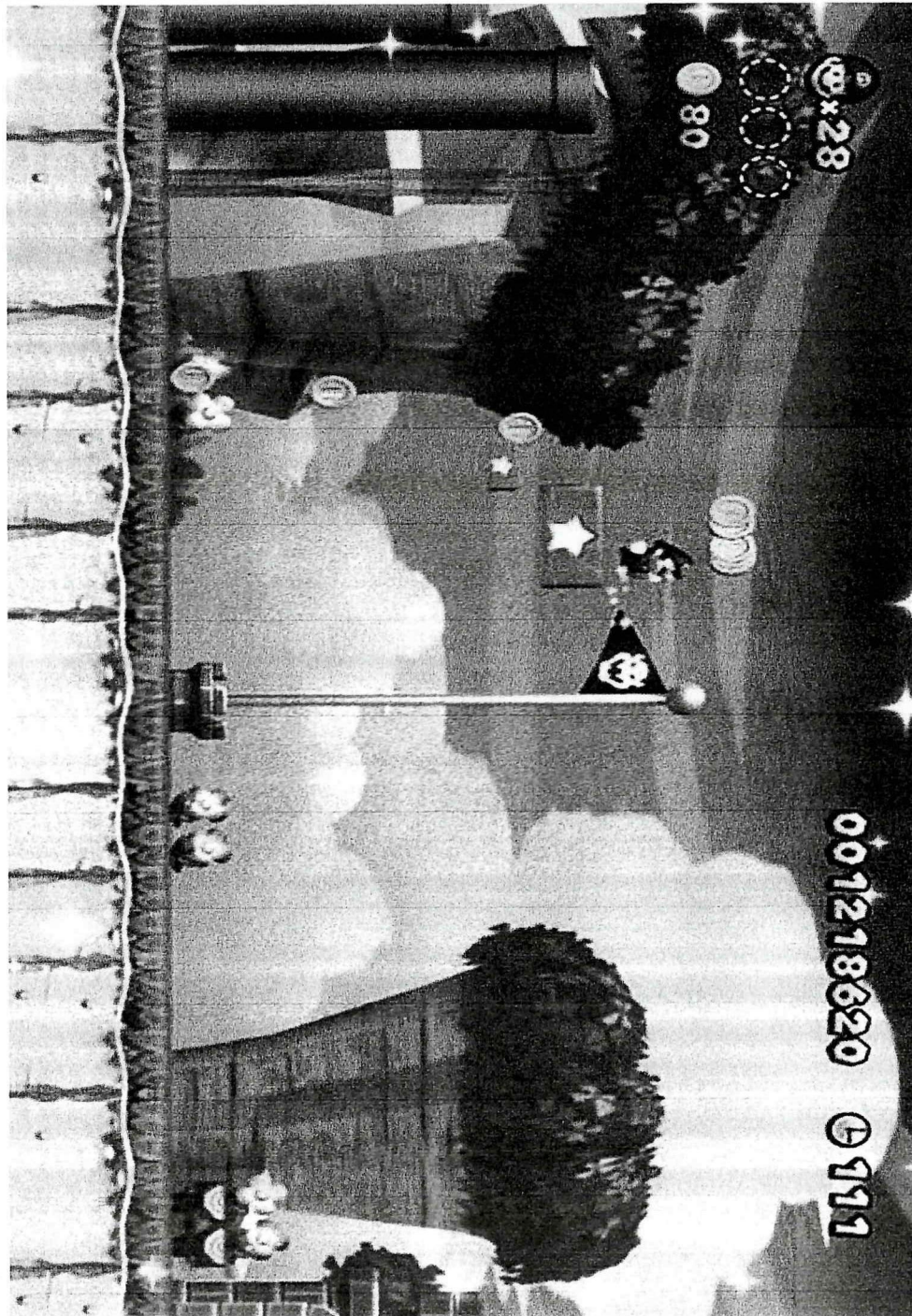


FIGURE Q1

(Mario Bros.: 2D game user interface example)

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