

Write your name here

Surname

Other names

**Pearson**  
**Edexcel GCSE**

Centre Number

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Candidate Number

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# Information and Communication Technology

## Unit 3: Exploring Digital Design

Thursday 26 May 2016 – Afternoon  
**Time: 1 hour 30 minutes**

Paper Reference

**5IT03/01**

**You do not need any other materials.**

Total Marks

### Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions in the spaces provided  
– *there may be more space than you need.*

### Information

- The total mark for this paper is 80.
- The marks for **each** question are shown in brackets  
– *use this as a guide as to how much time to spend on each question.*
- Questions labelled with an **asterisk** (\*) are ones where the quality of your written communication will be assessed  
– *you should take particular care on these questions with your spelling, punctuation and grammar, as well as the clarity of expression.*

### Advice

- Read each question carefully before you start to answer it.
- Try to answer every question.
- Check your answers if you have time at the end.

Turn over ►

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**PEARSON**

Answer ALL questions. Write your answers in the spaces provided.

Some questions must be answered with a cross . If you change your mind about an answer, put a line through the box  and then mark your new answer with a cross .

Woodpark Outdoor Centre provides activities and adventure holidays for schools and young people.

Nell is the manager of Woodpark Outdoor Centre.

She has employed Ashton to help develop digital products for the centre.

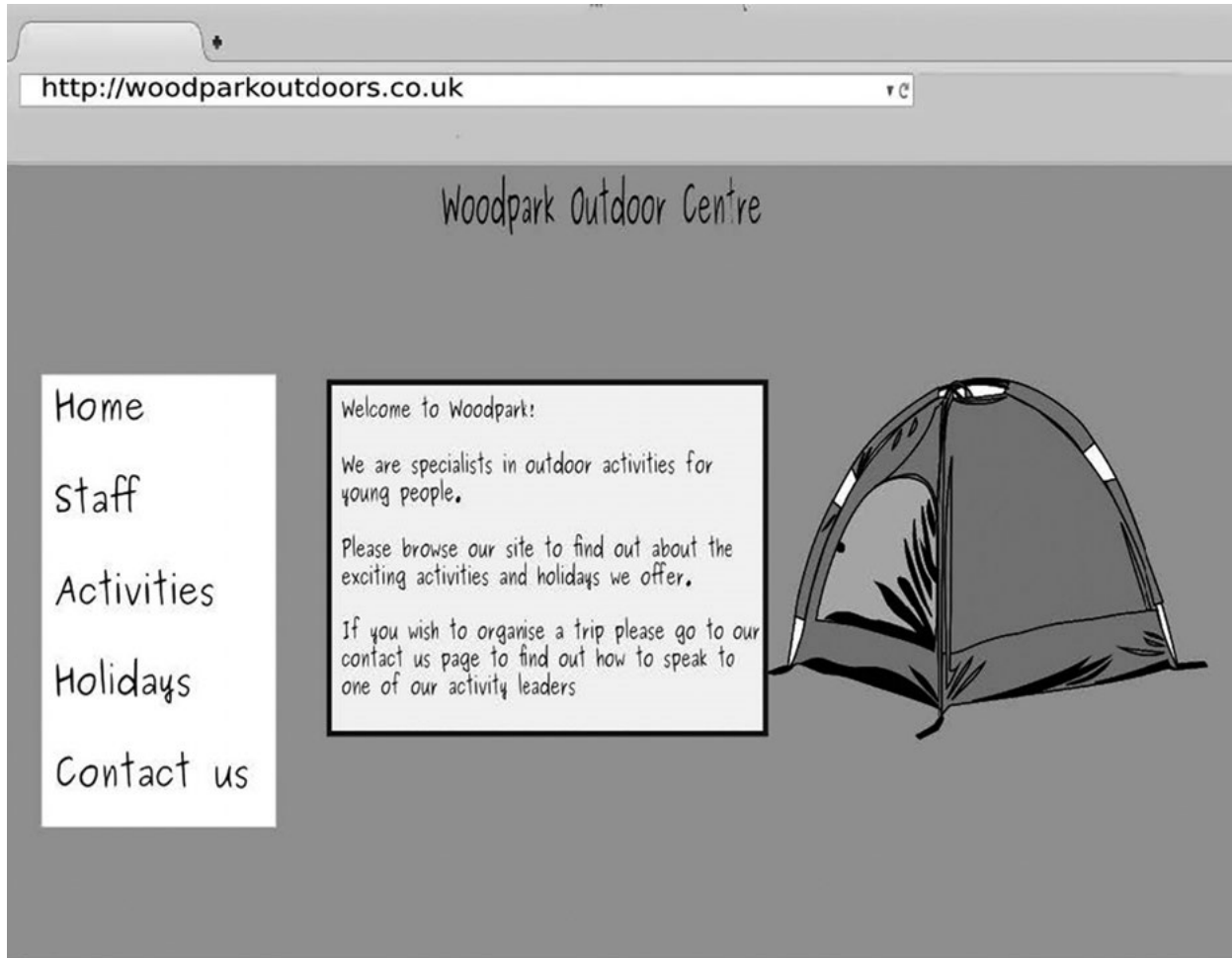


Figure 1

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1 Nell wants Ashton to redesign the centre's website.

**Figure 1** shows the homepage from the current website.

(a) (i) Identify **four** ways that the design of the homepage could be improved.

(4)

1 .....

2 .....

3 .....

4 .....

(ii) Ashton plans how the webpages will link together.

Which **one** of these design documents should he use?

(1)

- A** Entity relationship diagram
- B** Storyboard
- C** Site map
- D** Moodboard

(iii) Which **one** of these should Ashton use to make sure that the webpages have a consistent layout?

(1)

- A** Logo
- B** Template
- C** Menu
- D** Button



(iv) Ashton adds accessibility features to the website.

Which **one** of these is an accessibility feature?

(1)

- A** Bold fonts
- B** Large fonts
- C** Serif fonts
- D** Resizable fonts

(b) Websites designed to be used on a computer are not as easy to use on a smartphone.

Give **three** ways of making a website more usable on smartphones.

(3)

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(c) **Figure 2** shows a video player.

It contains two buttons that allow users to access online video.



**Figure 2**

Identify **two** ways the video can be accessed by users.

(2)

1 .....

2 .....

(d) Ashton creates a banner for the website. He saves the banner as a GIF file.

Give **two** reasons why he would use a GIF file for a website banner.

(2)

1 .....

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2 .....

.....

**(Total for Question 1 = 14 marks)**



2 Nell wants Ashton to create multimedia and printed adverts.

(a) Nell gives Ashton this specification for a multimedia advert.

**Multimedia Advert Specification**

**Title/Caption:**

'School Adventure Holidays'

**Information:**

- Small or large group holidays
- Term time or school holiday times available
- Fully qualified instructors
- Email us at [info@woodparkoutdoors.co.uk](mailto:info@woodparkoutdoors.co.uk)

**Additional Features:**

- Must contain centre logo
- Must contain an image
- Must use some form of animation

Use the space provided to draw a design for a multimedia advert that meets the specification.

(6)

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(b) (i) Ashton creates a printed advert.  
He repurposes text and images from the multimedia advert to make the products consistent.

Give **three other** ways Ashton could make sure the products are consistent.

(3)

1 .....

2 .....

3 .....

(ii) Repurposing text, sounds and images may save time compared to producing or sourcing new content.

Give **one** reason why repurposing content may save time.

(1)

.....

.....



(c) **Figure 3** shows the properties of two versions of an image.

Version 1	Version 2
<b>Name:</b> Outdoor.png	<b>Name:</b> Outdoor.bmp
<b>Size:</b> 1.7 MB	<b>Size:</b> 1.7 MB
<b>Dimensions:</b>	<b>Dimensions:</b>
<b>Width:</b> 2048 pixels	<b>Width:</b> 640 pixels
<b>Height:</b> 1536 pixels	<b>Height:</b> 480 pixels
<b>Colour Depth:</b> 24 bit	<b>Colour Depth:</b> 8 bit
<b>Resolution:</b> 300 dpi	<b>Resolution:</b> 72 dpi

**Figure 3**

Ashton wants to use one of the versions of the image in a printed advert.

- (i) Explain why the higher colour depth of version 1 would make it a better choice than version 2.

(2)

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- (ii) Explain why the higher resolution of version 1 would make it a better choice than version 2.

(2)

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**(Total for Question 2 = 14 marks)**



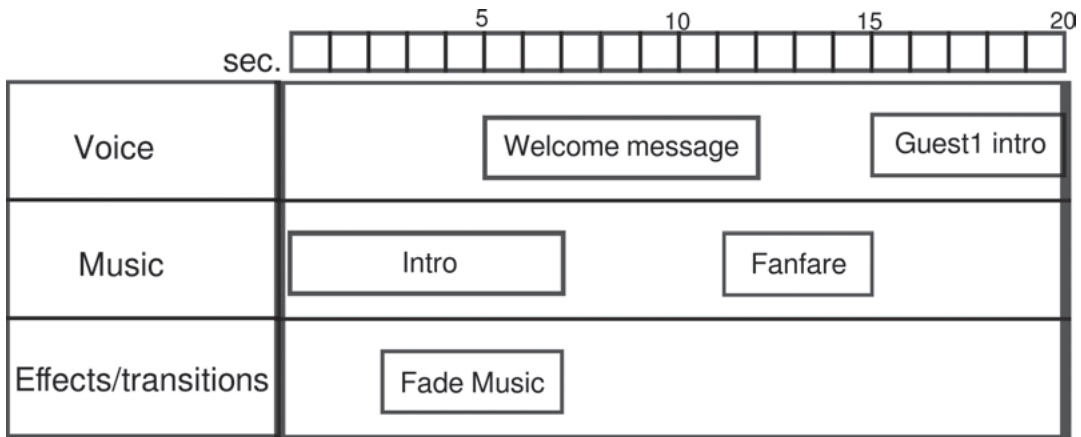


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3 Ashton designs an audio podcast for Woodpark Outdoor Centre.  
 This is part of the design document he uses to plan the podcast.



**Figure 4**

(a) (i) Which **one** of these is the type of design document shown in **Figure 4**? (1)

- A Test log
- B Timeline storyboard
- C Structure diagram
- D Mock-up

(ii) Give **one** way in which the type of design document in **Figure 4** is useful when planning a digital audio product. (1)

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.....

(b) When the podcast is completed it will be exported as an audio file.  
 Which **one** of these file types is **most** suitable for use as an audio file? (1)

- A .WAV
- B .AVI
- C .SVG
- D .SWF



(c) Ashton uses the internet to find sound effects to use in the podcast.

(i) He finds a sound file that is protected by copyright.

Describe what Ashton must do to legally use the sound file.

(2)

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(ii) Give **two** ways Ashton could source sounds that are not restricted by copyright.

(2)

1 .....

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2 .....

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(iii) Ashton uses a sound that has been compressed using a codec.

Give **three** drawbacks of using compressed sound files.

(3)

1 .....

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2 .....

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3 .....






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- (d) Ashton saves all of his audio files for the podcast in a folder and sends them to Nell.

**Figure 5** shows the contents of the folder.

Name	Size
 sound.#1.ogg.ogg	4.5 MB
 sound 3 finished!!!!.ogg	4.9 MB
 sound*2,editing.version.ogg	4.9 MB
 sound#1 .2#finished*version.ogg	8.0 MB
 sound#1 exported.ogg	4.5 MB

**Figure 5**

Ashton's use of naming conventions could be improved by using more meaningful file names.

Explain **one other** way Ashton could improve his use of naming conventions.

(2)

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- (e) The podcast will be accessed and listened to on many different types of digital devices.

Give **four** ways Ashton could ensure a good user experience on a range of devices.

(4)

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3 .....

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4 .....

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**(Total for Question 3 = 16 marks)**



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4 Ashton creates an e-learning package to teach children about outdoor activities.



Figure 6

(a) (i) **Figure 6** shows a screen from the e-learning package.

This screen tells users to 'Click on an object in the picture to find out more.'

Identify **three other** interactive features on this screen.

(3)

1 .....

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2 .....

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3 .....

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(ii) Ashton uses a sans-serif font for the text in the e-learning package.

Give **two** reasons why he uses a sans-serif font.

(2)

1 .....

.....

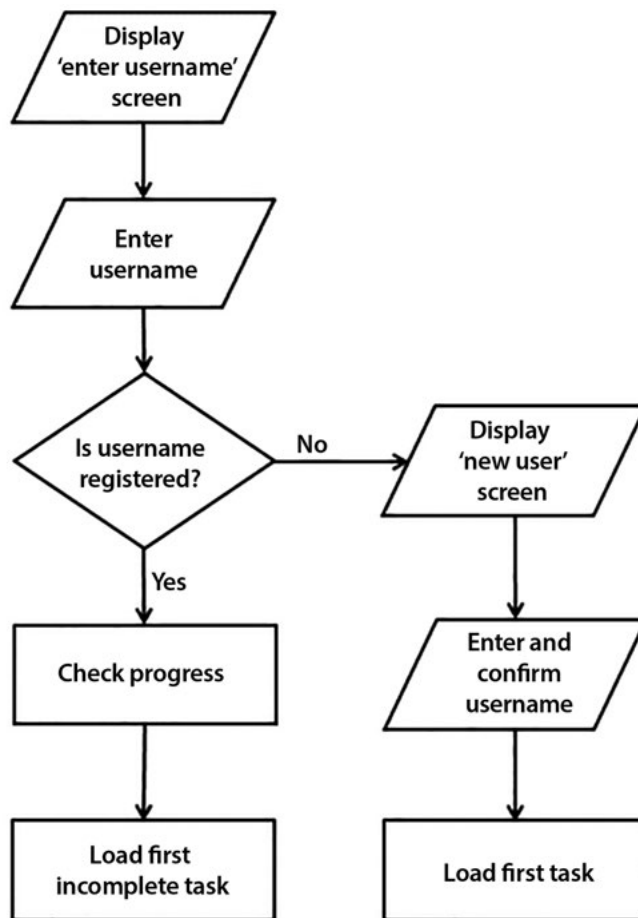
2 .....

.....



Users of the e-learning package need to register on the system with a username and password.

(b) Ashton uses flowcharts to plan the logic of sections of the e-learning package.



**Figure 7**

**Figure 7** shows part of one of his flowcharts.

(i) Explain the process in the flowchart.

(3)

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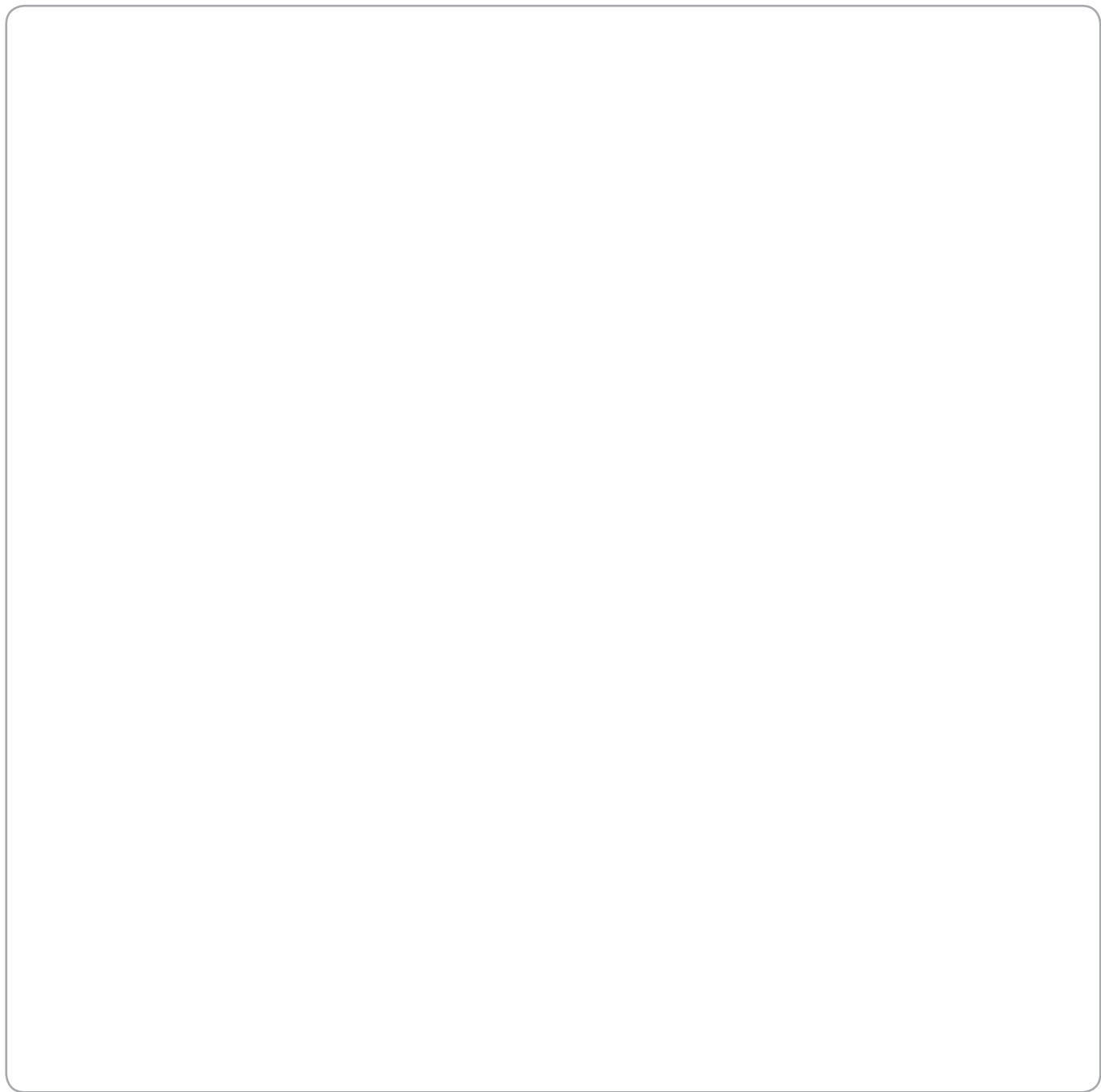
(ii) Ashton wants users to choose a password to complete their registration.

This section must:

- Display a screen that allows the user to enter a password
- Check that the password has at least 8 characters
  - If the password has fewer than 8 characters, then display a message telling the user to choose a new password, which is checked again
  - If the password has at least 8 characters, then display a message telling the user that a password has been created.

Use this space to draw a flowchart that describes this process.

(4)



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\*(c) The e-learning package will be made available to schools.

Discuss how using adults and children as test users will help ensure that the e-learning package is fit for purpose.

(6)

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**(Total for Question 4 = 18 marks)**

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5 (a) Nell asks Ashton to create a game. It will be available on the centre's website.  
Ashton creates a questionnaire to collect information from the target audience.

(i) Give **two benefits** of using a questionnaire to collect information. (2)

1 .....

2 .....

(ii) Give **two drawbacks** of using a questionnaire to collect information. (2)

1 .....

2 .....

(iii) Ashton uses audience profiling to identify the platforms used by the target audience.

Identify **two other** outcomes of audience profiling and state how each can be used to ensure the game is fit for purpose.

(4)

Outcome 1 .....

How used .....

Outcome 2 .....

How used .....



(b) Ashton creates a database to store all the information he collected from the questionnaires.

**Figure 8** shows the data entry form he uses. It includes radio buttons and a drop-down list.

The form contains the following elements:

- Questionnaire Number**: A text input field.
- Gender**: Two radio buttons labeled "Male" and "Female".
- Age**: A drop-down list.
- Town**: A wide text input field.
- Date Completed**: Two adjacent text input boxes for day and month.

**Figure 8**

(i) Explain **one** benefit of using radio buttons on a form.

(2)

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(ii) Explain why a drop-down list may not be appropriate for an age field.

(2)

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\*(c) Discuss how the platform of a game will influence its design.

(6)

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**(Total for Question 5 = 18 marks)**

**TOTAL FOR PAPER = 80 MARKS**



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