

Write your name here

Surname

Other names

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**Edexcel GCSE**

Centre Number

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Candidate Number

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# Information and Communication Technology

## Unit 3: Exploring Digital Design

Thursday 25 May 2017 – 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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**Answer ALL questions. Write your answers in the spaces provided.**

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

Ultimate Sporting Events Limited (USEL) organises international sports competitions for young people and adults.

Julianna is an event organiser at USEL. She is organising a large, multi-sport competition for able-bodied and impaired competitors from all over the world.

She has employed Ali to develop digital products for the event.

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1 Julianna asks Ali to create some digital products to promote the competition.

Figure 1 shows two stages of the development of a product.

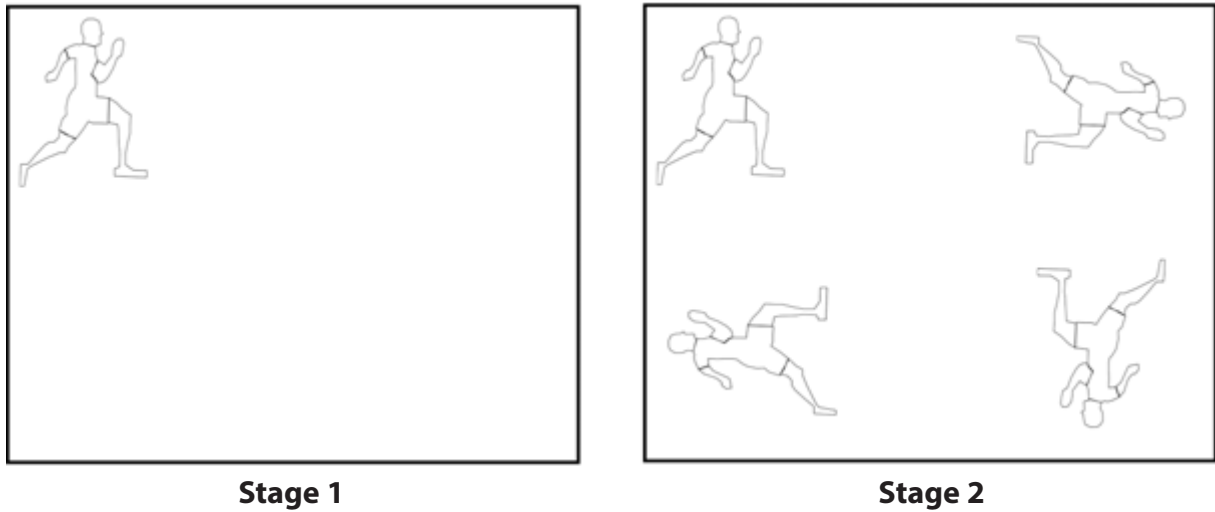


Figure 1

(a) (i) Ali uses the image in 'Stage 1' to produce 'Stage 2'.

Give **two** graphics tools that Ali could use to do this.

(2)

1 .....

.....

2 .....

.....

(ii) Ali uses a vector image.

Which **one** of these is a benefit of using a vector image?

(1)

- A** The image will not be blurred when enlarged
- B** The content will be more realistic
- C** The designer does not need permission to use the image
- D** The product can be used on more devices



(b) **Figure 2** shows two posters that Ali has created.

The posters advertise different events from the competition.



**Figure 2**

- (i) Julianna checks the posters. She tells Ali that it is not clear that the events are part of the same competition.

Identify **three** changes Ali could make to the posters to make it clear that the events are part of the same competition.

(3)

1 .....

2 .....

3 .....



(ii) The posters include a QR code and the website address.



Explain why Ali has included both a QR code and the website address.

(2)

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.....

(iii) Ali will make the posters available for download.

He saves the posters as PDF files instead of the file type used by his Desk Top Publishing software.

Which **one** of these is a benefit of saving files as PDFs?

(1)

- A Allows animation
- B Improves functionality
- C Enforces copyright
- D Increases compatibility

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(c) Julianna wants Ali to create a digital poster.  
Ali needs to draw attention to some content in the digital poster.

(i) More important content can be larger than other content.

State the name of this design principle.

(1)

.....  
.....

(ii) The digital poster will use animation.

State **two** ways that animation can be used to draw attention to some content.

(2)

1 .....

2 .....

(d) Ali wants to use content that has been created by others.

State **two** ways that Ali can ensure he can legally use content created by others.

(2)

1 .....

2 .....

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



2 Julianna asks Ali to create a database to store information about the competition.

(a) Which **one** of these design documents shows database tables and the links between them?

(1)

- A** Storyboard
- B** Moodboard
- C** Entity Relationship Diagram
- D** Mock-up

(b) One table will hold information about competitors.

A data entry form will be used to input data to this table.

**Figure 3** shows an incomplete design for the form.

Complete the design so that:

- data entry fields are appropriately sized.
- data entry methods improve ease of use and accuracy for:
  - 'Date of birth'
  - 'Category'.

(4)

**Competitor Table**

Title:  
e.g. Mr., Mrs.

Name:

Country:

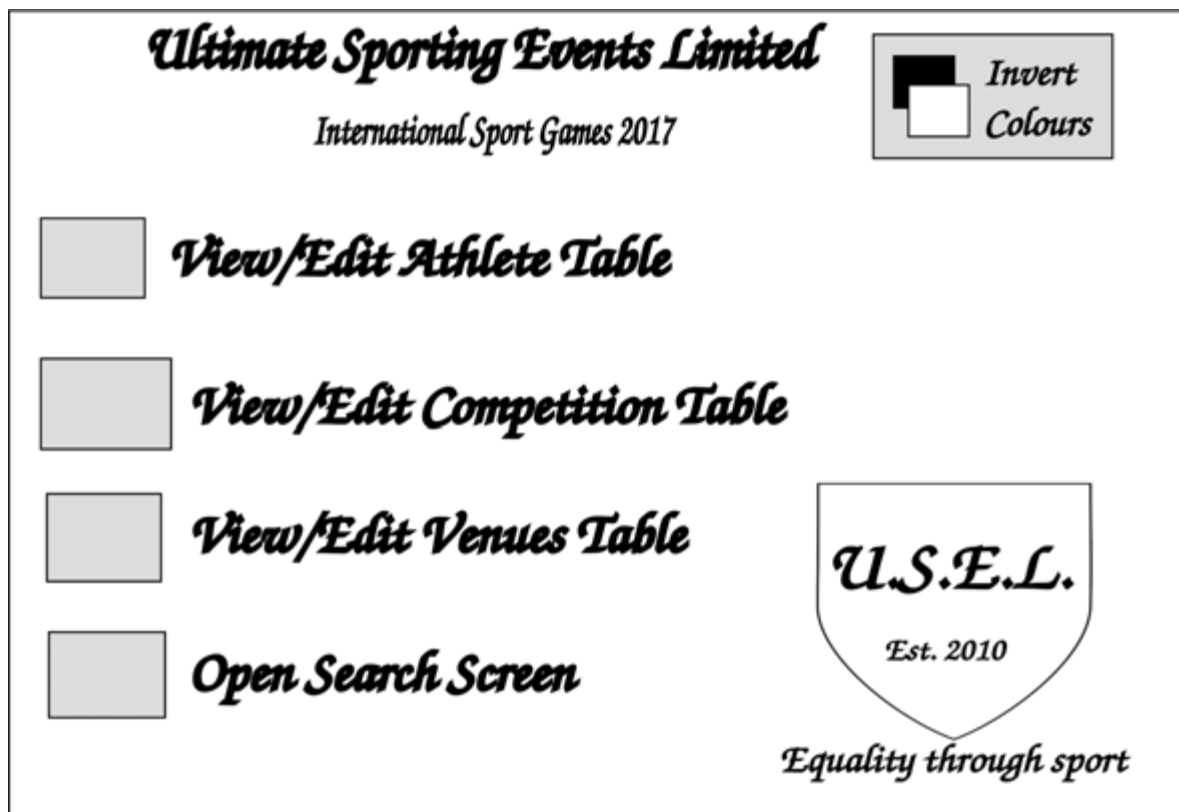
Date of birth:

Category:  
Able-bodied/Impaired

**Figure 3**



(c) **Figure 4** shows the first version of a menu screen for the database.



**Figure 4**

- (i) The menu screen includes a button that inverts colours to aid visually impaired users.

Give **two other** accessibility features Ali could add to the menu screen.

(2)

1 .....

2 .....





(ii) Give **two** reasons why digital products should include accessibility features. (2)

1 .....

2 .....

(iii) Identify **two** ways, other than accessibility features, that the menu screen in **Figure 4** could be improved. (2)

1 .....

2 .....

(d) Ali has included the USEL logo on the menu screen.

The logo is saved as an image and used on a range of digital and physical products.

State the image file type that should be used for a logo and explain why it is suitable.

(3)

File type

Why it is suitable

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



3 Julianna asks Ali to create a website for the competition.

(a) Ali identifies the pages that the website will contain and how they will link together.

State the design document that Ali would use for this.

(1)

(b) (i) Ali uses a template when creating the website.

Give **two** benefits of using a template.

(2)

1 .....

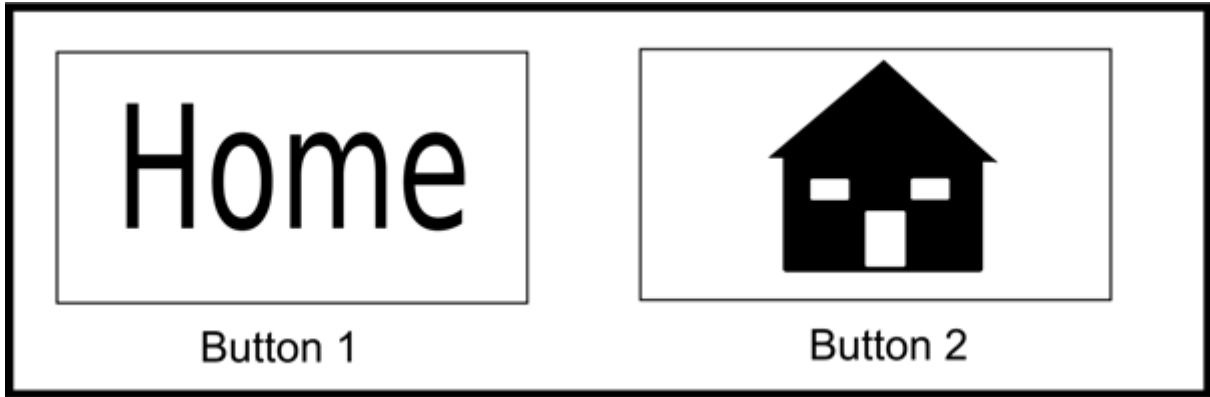
.....

2 .....

.....



(ii) **Figure 5** shows two versions of a button that Ali could use on the web pages.



**Figure 5**

The website must be easy to use by as many people as possible.

Explain **one** reason why 'Button 2' would make the website easier to use than 'Button 1'.

(2)

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(c) Ali adds 'Alt text' to the images he includes on the web pages.

Describe how the use of 'Alt text' supports users with poor internet connections.

(2)

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(d) When an image is added to the web page and enlarged it becomes pixelated.

Explain why a JPEG image pixelates when enlarged.

(2)

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(e) Ali adds a 'roll-over' effect to the navigation menu.

Describe how the use of 'roll-over' effects optimises the use of screen space.

(3)

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(f) Ali will produce mobile and desktop versions of the web pages.

Explain **two** reasons why the desktop version of a web page often has a greater range of content.

(4)

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2 .....

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



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4 There will be interactive information points to help visitors at the sporting venues.

(a) Visitors will access the information points using a touch screen instead of a mouse.

Give **two** ways in which using a touch screen interface affects the design of the information points.

(2)

1 .....

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2 .....

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(b) The information points will be mounted on walls at the venues.

Explain **one** drawback of using a touch screen interface for these information points.

(2)

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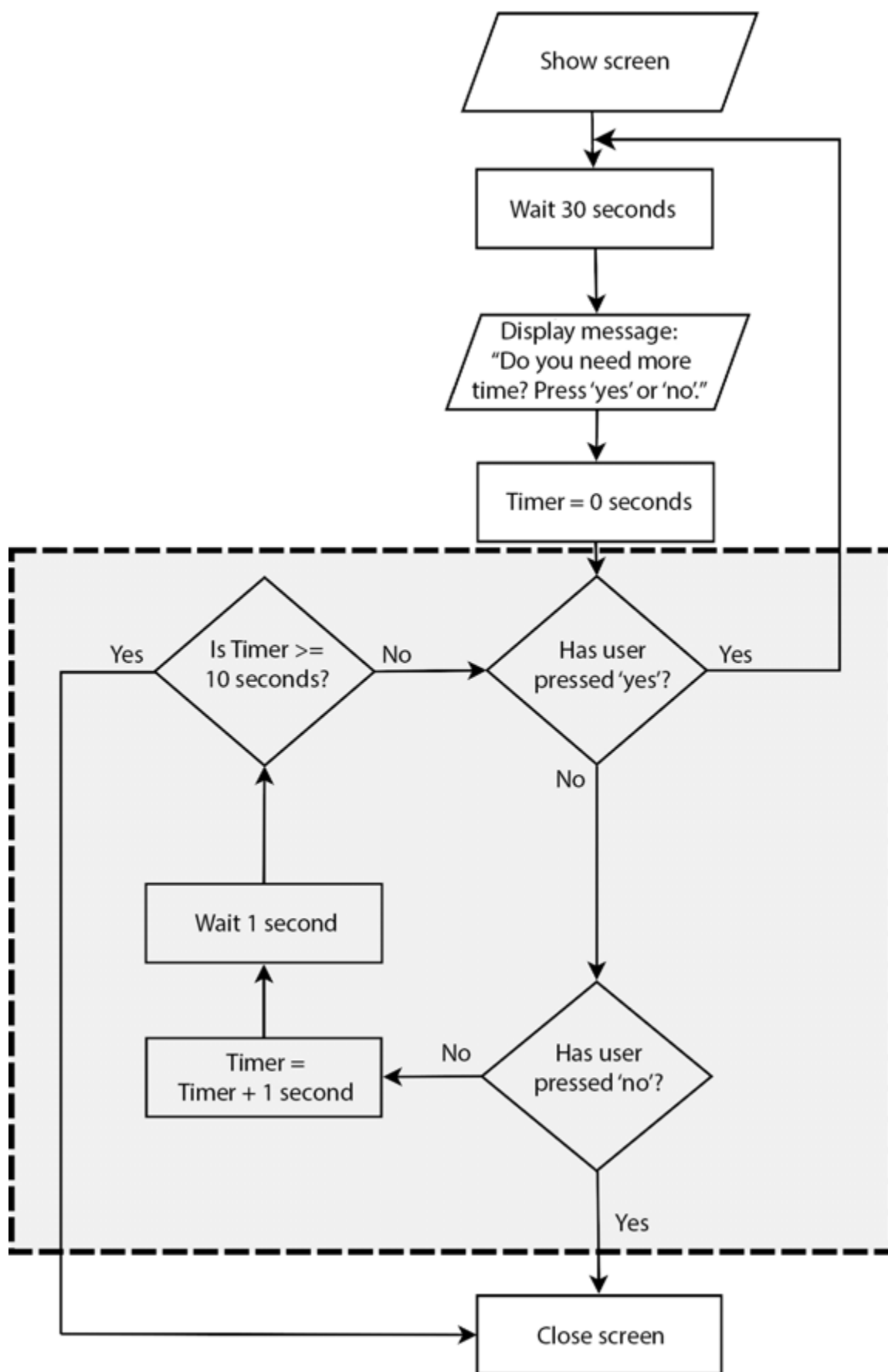
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P 4 8 7 5 4 A 0 1 3 2 4

**Figure 6** shows part of a larger flowchart used to plan how the information point will work when each screen is opened from the menu.



**Figure 6**



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(c) The shaded area in **Figure 6** shows a loop.

(i) State **two** conditions that will break the loop.

(2)

1 .....

2 .....

(ii) Explain the purpose of the loop.

(2)

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P 4 8 7 5 4 A 0 1 5 2 4

- (d) The information points will be used by young people and adults as well as able-bodied and impaired athletes from all over the world.

Ali has chosen three users to test the information point.

**Figure 7** shows the profiles of the three users.

User 1		User 2	
<b>Gender</b>	Male	<b>Gender</b>	Female
<b>Age</b>	24	<b>Age</b>	25
<b>Education level</b>	University	<b>Education level</b>	College
<b>First language</b>	English	<b>First language</b>	English
<b>Additional languages spoken</b>	No	<b>Additional languages spoken</b>	Yes
<b>ICT skill level</b>	High	<b>ICT skill level</b>	High
<b>Disabilities</b>	None	<b>Disabilities</b>	None

User 3	
<b>Gender</b>	Male
<b>Age</b>	24
<b>Education level</b>	School
<b>First language</b>	English
<b>Additional languages spoken</b>	No
<b>ICT skill level</b>	Low
<b>Disabilities</b>	None

**Figure 7**





(i) Identify **two** characteristics from the user profiles shown in **Figure 7** that might not represent the target audience.

(2)

1 .....

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2 .....

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(ii) Explain why the profiles of test users should represent the target audience.

(2)

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\* (e) Discuss how the content and functionality of the information point will be affected by the intended purpose and target audience.

(6)

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(Total for Question 4 = 18 marks)



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5 Julianna asks Ali to create a 'Highlights' movie using videos from different events.

(a) The movie will use transitions.

(i) Which **one** of these would be used in a transition?

(1)

- A Button
- B Field
- C Menu
- D Animation

(ii) Which **one** of these is a transition used for?

(1)

- A To persuade the user to watch the movie
- B To test that the movie works on different devices
- C To link two videos together
- D To increase the volume of the audio track

(iii) Ali plans the movie using a timeline storyboard.

Explain **one** benefit of using a timeline storyboard when designing a movie.

(2)

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(b) During development Ali adds sound effects to the movie.

Give **two other** types of audio Ali could add to the movie.

(2)

1 .....

2 .....

(c) **Figure 8** shows a plan for the development of the movie.

Week 1	Week 2	Week 3	Week 4	Week 5
Gather video clips	Edit and combine video clips	User testing	Analyse test results	Upload movie to website
Source audio	Edit audio			
Seek audio permissions	Seek audio permissions			
	Export movie ('Highlights movie V1.0')			

**Figure 8**



(i) During week 4 Ali will analyse the results from user testing.

Describe what Ali should do after he has done this.

(3)

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(ii) Ali creates version 1.0 of the movie in week 2.

Explain why versioning is used when creating and maintaining digital products.

(3)

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\* (d) Users will access and view the 'Highlights' movie online.

Ali wants users to have a good experience.

Discuss the factors Ali should consider when creating content to be shared online.

(6)

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

**TOTAL FOR PAPER = 80 MARKS**

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