

Write your name here

Surname

Other names

Centre Number

Candidate Number

Edexcel GCSE

Information and Communication Technology

Unit 3: Exploring Digital Design

Sample Assessment Material
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.
- Keep an eye on the time.
- Try to answer every question.
- Check your answers if you have time at the end.

Turn over ►

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2/2



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'Sounds' is a music store owned by Parul.

Figure 1 shows the home page of the 'Sounds' website.

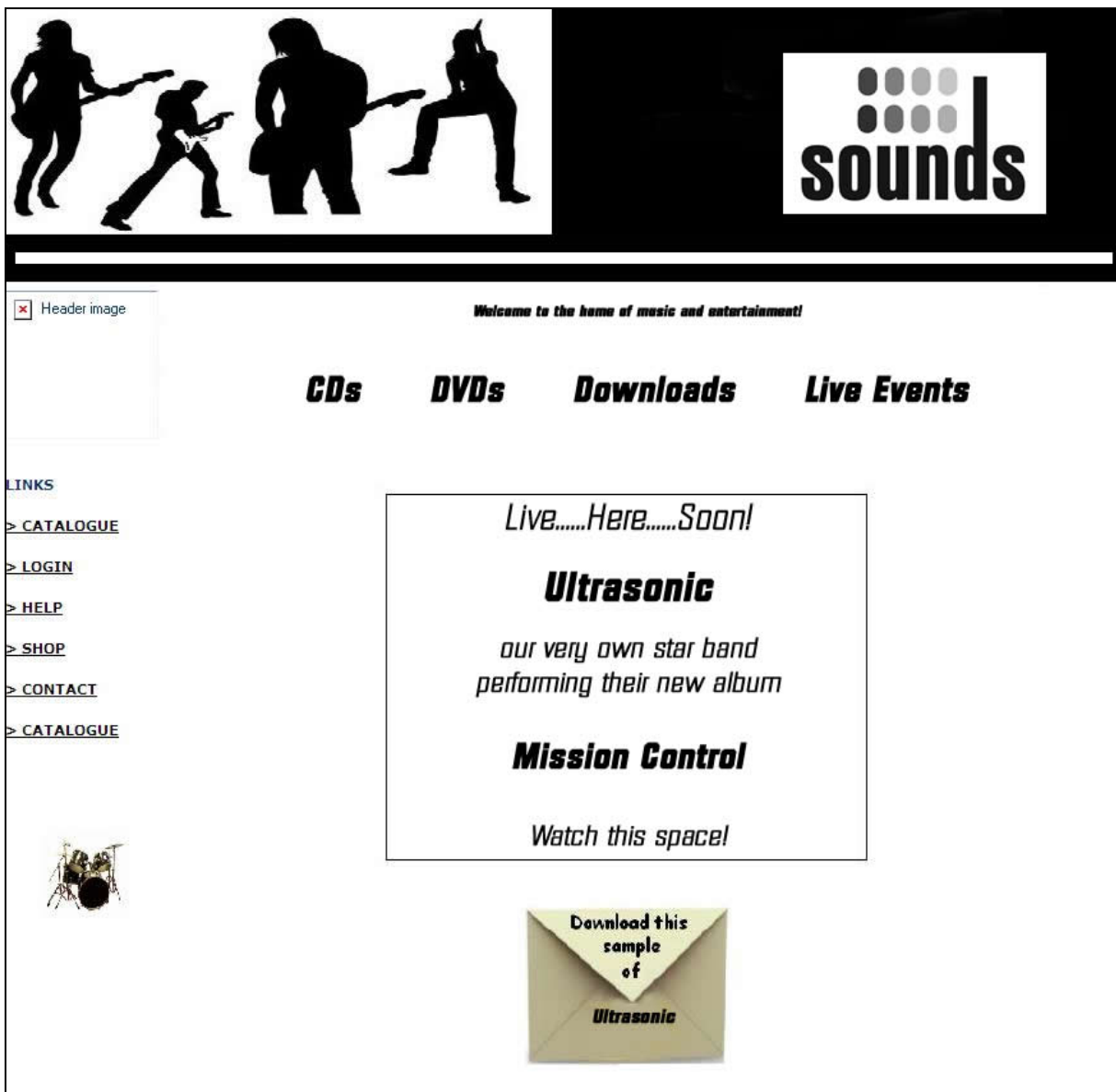


Figure 1

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

1 Parul knows that the '*Sounds*' website needs to be improved.

(a) Figure 1 shows the home page.

One improvement that could be made to the home page is to make some of the text bigger.

State four other ways in which the page could be improved.

(4)

- 1
- 2
- 3
- 4

(b) Jez is redesigning the '*Sounds*' website.

He needs to know about the people who use the website.

He knows that their age range is 15 - 25 years old.

(i) State **three** other things he needs to find out about the people who use the website.

(3)

- 1
- 2
- 3

(ii) State **two** methods Jez could use to find out more about the people who use the website.

(2)

1

.....

2

.....

(c) Jez produces a moodboard for the new website.

(i) State **three** things that the moodboard should show.

(3)

1

2

3

(ii) Jez shows the moodboard to Parul.

Explain why he does this.

(2)

.....

.....

.....

(Total for Question 1 = 14 marks)

Blank Page

2 Ultrasonic is a local band. It will be playing live in the 'Sounds' store soon.

Jez is designing a digital poster to promote the event. The poster consists of a sequence of three screens.

Figure 2 shows an outline storyboard for the poster.

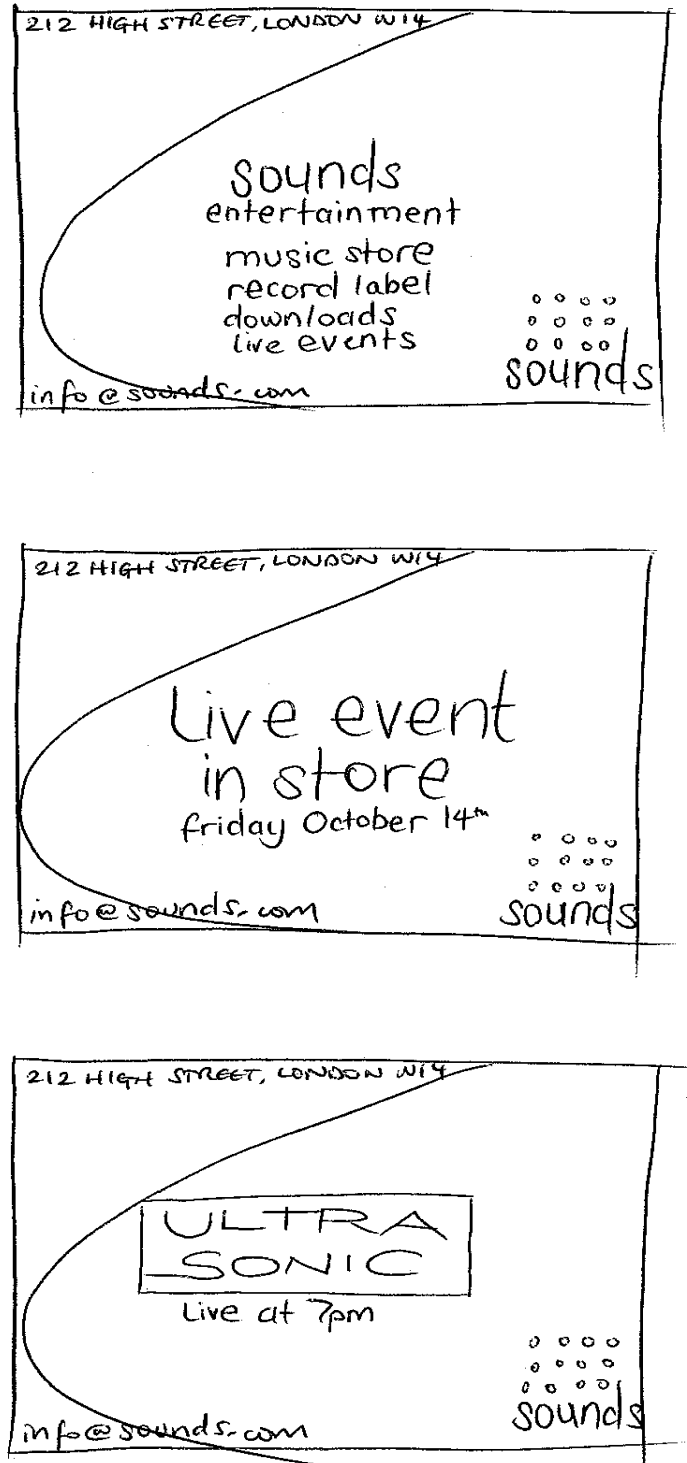


Figure 2

(a) Give **two** reasons for producing a storyboard.

(2)

- 1
- 2

(b) The storyboard is incomplete.

State **two** other design features that should be shown on the storyboard.

(2)

- 1
- 2

(c) Some content appears on each screen, helping to make the poster consistent.

State **two** other things Jez could do to make the poster consistent.

(2)

- 1
- 2

(d) The poster must scroll continuously. Draw arrows on the storyboard in Figure 3 to show how the screens are linked.

(2)

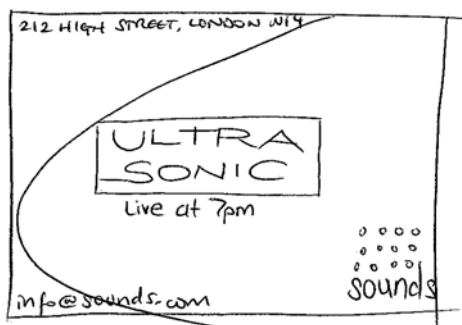
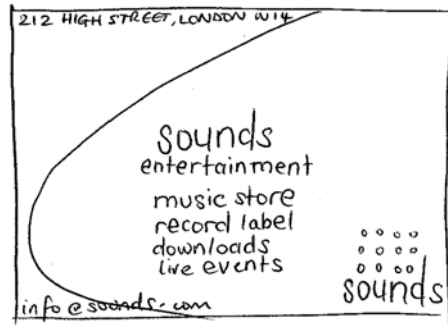


Figure 3

(e) Parul tells Jez that she needs more time to read each screen.

Describe what Jez can do to solve this problem.

(2)

.....

.....

.....

(f) Jez has found an image with a Creative Commons® licence.

Explain what a Creative Commons® licence is.

(2)

.....

.....

.....

(g) A logo is used on all publications produced by '*Sounds*'.

Explain **one** reason why the logo should be a vector graphic.

(2)

.....

.....

.....

(Total for Question 2 = 14 marks)

3 Jez has created a database to store customer details collected from the website.

Figure 4 shows his mock-up of the data entry form for the website.

The registration form is titled "Registration" and includes the "sounds" logo. It contains the following fields and elements:

- Title**: Text input field
- First Name**: Text input field
- Last Name**: Text input field
- Date of birth**: Text input field with a placeholder "dd/mm/yyyy"
- Gender**: Dropdown menu
- Email address**: Text input field
- Confirm email address**: Text input field
- Music Preference**: Dropdown menu with options: Rock 'n pop, Rap, Heavy metal, Garage, Bhangra
- Submit**: Button

Figure 4

(a) The 'Music Preference' field has a drop-down menu.

Give two reasons for using a drop-down menu.

(2)

1

.....

2

.....

(b) Drop-down menus are one feature on the data entry form.

State one other feature that appears on the data entry form.

(1)

.....

(c) Customers must click on 'Submit' when they have finished entering their details.

Describe what happens when they do this.

(2)

.....

.....

.....

(d) Customers should be able to select more than one music preference on the data entry form.

Redesign the music preference section of the form in **Figure 5** to make this possible.

Include a suitable instruction.

(3)

The image shows a data entry form with a light gray background. At the top left, there is a label 'Email address' above a white rectangular input field. To its right, there is a label 'Confirm email address' above another white rectangular input field. Below the 'Email address' field, there is a label 'Music Preference' followed by a large, empty space for text entry. On the right side of the form, there is a rectangular button with a gradient and the text 'Submit' in the center.

Figure 5

(e) Parul wants an animated banner at the top of the data entry form. It will be used to advertise music downloads.

(i) Give **two** reasons for using a banner advert.

(2)

1

.....

2

.....

(ii) Give **one** disadvantage of putting the banner on the form.

(1)

.....

.....

(f) Jez must make the data entry form accessible to as many users as possible.

(i) Give **three** accessibility features that can be used on a data entry form.

(3)

1

.....

2

.....

3

.....

(ii) Give **two** methods of testing a data entry form for accessibility.

(2)

1

.....

2

.....

(Total for Question 3 = 16 marks)

4. Jez produces videos of live performances at the '*Sounds*' store.

(a) Students from local schools are invited to audition in front of a panel.
Jez wants to video the auditions.

Describe what Jez should do to comply with legal requirements before using the footage in a video.

(2)

.....
.....
.....

(b) Jez produces a timeline for each video.

State **three** things a timeline should show.

(3)

1

2

3

(c) Videos can be downloaded from the '*Sounds*' website.

Jez compresses each video.

(i) Give **one** advantage of compressing a video.

(1)

.....
.....

(ii) Give **one** possible disadvantage of compressing a video.

(1)

.....
.....

(d) Downloading and streaming are two different methods of accessing video on the internet.

Compare these **two** methods of accessing video on the internet.

(4)

.....
.....
.....
.....
.....
.....
.....
.....

(e) Jez uses a video codec.

Give **one** reason why a video codec is used.

(1)

.....
.....

Blank Page

5 Jez is designing a computer game for the website.

Figure 6 shows the flowchart for Level 1 of the game.

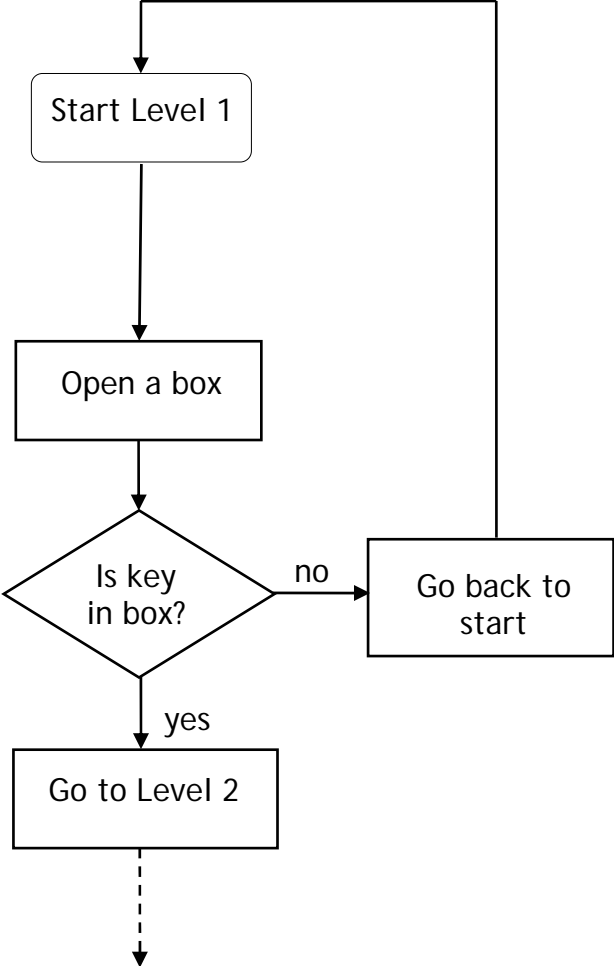


Figure 6

(a) Flowcharts are useful design tools.

(i) Give two reasons for using a flowchart when designing a game.

(2)

1

.....

2

.....

(ii) Describe what happens in the part of the game shown in Figure 6.

(2)

.....

.....

.....

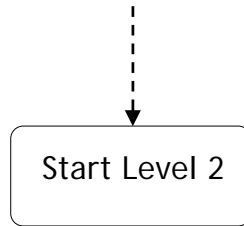
.....

(iii) When players enter Level 2 they must choose either a ring or a coin.

If they choose the ring they get 100 points. If they choose the coin they get 25 points.

Draw a flowchart to show this part of the game.

(5)



(b) Jez produces a structure chart for the game.

Give one reason for using a structure chart.

(1)

.....
.....

(c) Levels 1 and 2 of the game will include some sound effects.

Identify two suitable sound effects and where each will be used.

(2)

Effect 1

.....

Where used:

.....
.....
.....

Effect 2

.....

Where used:

.....
.....
.....

GCSE

Information and Communication Technology (ICT)

Sample Mark Scheme

Edexcel GCSE in Information and Communication Technology (ICT) (Double Award) (2IT02)

Unit 3: Exploring Digital Design



General Marking Guidance

- This mark scheme gives you:
 1. An idea of the type of response expected / acceptable / not acceptable
 2. How individual marks are to be awarded
 3. Specific codes styles used in this marks scheme
 4. Information on how to apply this mark scheme
- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.
- Mark schemes will indicate within the table where, and which strands of QWC, are being assessed. The strands are as follows:
 - i) *ensure that text is legible and that spelling, punctuation and grammar are accurate so that meaning is clear*
 - ii) *select and use a form and style of writing appropriate to purpose and to complex subject matter*
 - iii) *organise information clearly and coherently, using specialist vocabulary when appropriate.*

Specific Amplification

- Each different answer is determined by a bullet point
- / means that the responses are **alternatives** of the same answer and either answer should receive credit
- sub marks are indicated by (1)

Marking

- Only answers that make sense can be credited. Where candidates are required to describe or explain etc, words/phrases which are put together in a meaningless manner cannot be credited
- Do not award marks for repeat of the stem of the question.
- The answers given in the mark scheme are exemplars and have been written in adult terminology. Credit must be given for answers which convey the same meaning as detailed here as well as correct answers that are not shown here.

Question Number	Answer	Do not accept	Additional Guidance	Mark
1 (a)	<p>Any four improvements from:</p> <ul style="list-style-type: none"> • add colour • make the drum kit image bigger/ reposition image • replace text links with buttons • delete repeated link (catalogue) • replace the envelope image with a more suitable one • mend broken link to header image <p style="text-align: right;">4x1</p>	<ul style="list-style-type: none"> • Any reference to making the text bigger / increasing font size 	Accept converse (implied improvement), e.g. the drum kit is too small	(4)

Question Number	Answer	Do not accept	Additional Guidance	Mark
1 (b)(i)	<p>Any three things from:</p> <ul style="list-style-type: none"> • gender • music preferences • preferred method of accessing the internet • IT skills • where they buy most of their CDs • downloads v CDs • connection speed <p style="text-align: right;">3x1</p>	<ul style="list-style-type: none"> • Age 		(3)

Question Number	Answer	Do not accept	Additional Guidance	Mark
1 (b)(ii)	<p>Any two methods from:</p> <ul style="list-style-type: none"> • interviews • survey / questionnaire • focus group • information gathered from cookies <p style="text-align: right;">2x1</p>	<ul style="list-style-type: none"> • Observation / look at documents, as these research methods are not suitable in this case • Do not accept both survey and questionnaire 		(2)

Question Number	Answer	Do not accept	Additional Guidance	Mark
1 (c)(i)	<p>Any three things from:</p> <ul style="list-style-type: none"> • colour scheme • branding • image style/type • font style <p style="text-align: right;">3x1</p>			(3)

Question Number	Answer	Do not accept	Additional Guidance	Mark
1 (c)(ii)	<p>Explanation:</p> <p>To give Parul an impression of what the website will look like (1) so that she can say what she likes and dislikes / give Jez feedback / so that he can make changes (1)</p> <p style="text-align: right;">1+1</p>		<p>An explanation requires linked responses for maximum marks.</p> <p>Individual statements score 1 mark max</p>	(2)

Total for question 1				14
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Question Number	Answer	Do not accept	Additional Guidance	Mark
2 (a)	<p>Any two reasons from:</p> <ul style="list-style-type: none"> to show the layout of screen elements to identify what elements he will need to gather to show Parul what the poster will look like to refer back to during the development stage <p style="text-align: right;">2x1</p>	<ul style="list-style-type: none"> Images / photographs Screenshots Printouts 		(2)

Question Number	Answer	Do not accept	Additional Guidance	Mark
2 (b)	<p>Any two design features from:</p> <ul style="list-style-type: none"> font size font style font colours background colours animation transitions colour scheme <p style="text-align: right;">2x1</p>	<ul style="list-style-type: none"> Buttons / navigation / links Images Text 	Allow colour once only	(2)

Question Number	Answer	Do not accept	Additional Guidance	Mark
2 (c)	<p>Any two things from:</p> <ul style="list-style-type: none"> • use consistent font styles/sizes • use a template • use consistent colours/colour scheme • use the same transition timings/styles between screens • use the same theme music/ sounds on every screen <p style="text-align: right;">2x1</p>	<ul style="list-style-type: none"> • Logo or any other content 		(2)

Question Number	Answer	Do not accept	Additional Guidance	Mark
2 (d)	<p>Storyboard showing:</p> <ul style="list-style-type: none"> • arrows between screens • arrow showing return to start <p style="text-align: right;">1+1</p>			(2)

Question Number	Answer	Do not accept	Additional Guidance	Mark
2 (e)	<p>Any one description from:</p> <ul style="list-style-type: none"> • increase the time delay between slides (1) so that Parul has more time to read each screen (1) • remove repeated text (1) so that Parul has less to read (1) <p style="text-align: right;">1+1</p>	<p>Reduce the amount of text (unless qualified)</p> <p>Allow user to move forward</p>	<p>One mark for initial point</p> <p>One mark for additional linked point</p>	(2)

Question Number	Answer	Do not accept	Additional Guidance	Mark
2 (f)	<p>Explanation:</p> <p>Person who creates the images retains copyright (1) but licenses them for others to use (1)</p> <p style="text-align: right;">1+1</p>	The image is free to use	<p>An explanation requires linked responses for maximum marks.</p> <p>Individual statement scores 1 mark max</p>	(2)

Question Number	Answer	Do not accept	Additional Guidance	Mark
2 (g)	<p>An explanation that makes reference to any points from:</p> <p>Either:</p> <ul style="list-style-type: none"> • vector graphics are re-scaleable (1) without image quality being degraded / without image becoming distorted (1) <p>Or:</p> <ul style="list-style-type: none"> • vector graphics have a smaller file size (1) which makes them more suitable for use on web pages (1) <p style="text-align: right;">1+1</p>		<p>An explanation requires linked responses for maximum marks.</p> <p>Individual statement scores 1 mark max</p>	(2)

Total for question 2	14
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Question Number	Answer	Do not accept	Additional Guidance	Mark
3 (a)	<p>Any two reasons from:</p> <ul style="list-style-type: none"> • to reduce the amount of typing people have to do • to make the form user friendly • to reduce errors • to avoid open-ended responses • to save space <p style="text-align: right;">2x1</p>			(2)

Question Number	Answer	Do not accept	Additional Guidance	Mark
3 (b)	<p>Any one from:</p> <ul style="list-style-type: none"> • field • button • instruction text • logo • label <p style="text-align: right;">1x1</p>			(1)

Question Number	Answer	Do not accept	Additional Guidance	Mark
3 (c)	<p>Description:</p> <p>Details entered are validated / a check is made that all required fields have been completed / a check is made that the two email addresses are the same (1) the details are then entered in the database (1)</p> <p style="text-align: right;">1+1</p>		<p>One mark for initial point</p> <p>One mark for additional linked point</p>	(2)

Question Number	Answer	Do not accept	Additional Guidance	Mark
3 (d)	<p>Diagram or description showing :</p> <ul style="list-style-type: none"> • list of music types • tick box/ radio buttons next to each one • suitable instructions re being able to tick more than one type of music <p style="text-align: right;">1+1+1</p>		<p>One mark for method</p> <p>One mark for user instructions</p> <p>One mark for suitable layout</p>	(3)

Question Number	Answer	Do not accept	Additional Guidance	Mark
3 (e)(i)	<p>Any two reasons from:</p> <ul style="list-style-type: none"> • will attract attention /hard to overlook • can give additional information • easily updated • can be personalised to the user <p style="text-align: right;">2x1</p>			(2)

Question Number	Answer	Do not accept	Additional Guidance	Mark
3 (e)(ii)	<p>Any one disadvantage from:</p> <ul style="list-style-type: none"> • it might annoy some people and put them off filling in the form/ visiting the website. • it might distract users and cause them to enter their details incorrectly • load time of page for users with slower connections <p style="text-align: right;">1x1</p>			(1)

Question Number	Answer	Do not accept	Additional Guidance	Mark
3 (f)(i)	<p>Any three features from:</p> <ul style="list-style-type: none"> • Alt text • resizable fonts • 'listen to this page' option • screen reader support • colour combinations <p style="text-align: right;">3x1</p>			(3)

Question Number	Answer	Do not accept	Additional Guidance	Mark
3 (f)(ii)	<p>Any two methods from:</p> <ul style="list-style-type: none"> • ask test users with a disability to test the form • observe someone using the form • use a service that checks and gives an accessibility rating /accessibility checker <p style="text-align: right;">2x1</p>			(2)

Total for question 3				16
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Question Number	Answer	Do not accept	Additional Guidance	Mark
4 (a)	<p>Description:</p> <ul style="list-style-type: none"> • get written permission (1) from parents/guardian of anyone under age 18 (1) • have a disclaimer on the entry ticket (1) • blur faces (1) so that individuals can't be recognised (1) <p style="text-align: right;">2x1</p>		<p>One mark for initial point</p> <p>One mark for additional linked point</p>	(2)

Question Number	Answer	Do not accept	Additional Guidance	Mark
4 (b)	<p>Any three things from:</p> <ul style="list-style-type: none"> • Sound track / audio • Frames /scenes • Transition/effects • Assets • Titles <p style="text-align: right;">3x1</p>	<ul style="list-style-type: none"> • Timings unless qualified 		(3)

Question Number	Answer	Do not accept	Additional Guidance	Mark
4 (c)(i)	<p>Any one advantage from:</p> <ul style="list-style-type: none"> • reduces the file size • quicker to download • faster page loading <p style="text-align: right;">1x1</p>			(1)

Question Number	Answer	Do not accept	Additional Guidance	Mark
4 (c)(ii)	<p>Disadvantage:</p> <ul style="list-style-type: none"> • may affect the quality <p style="text-align: right;">1x1</p>			(1)

Question Number	Answer	Additional Guidance	Mark										
4 (d)	<table border="1"> <thead> <tr> <th>Download method</th> <th>Streaming method</th> </tr> </thead> <tbody> <tr> <td>entire video file must be saved on user's computer before they can open and view it</td> <td>file sent to the user in a constant stream so the user can start watching the video as soon as it begins downloading / can have real-time video</td> </tr> <tr> <td>can view video off-line</td> <td>be buffering/pausing during playback due to packet delay</td> </tr> <tr> <td>available for longer /indefinitely</td> <td>limited availability</td> </tr> <tr> <td>user has complete control over viewing point</td> <td>sometimes have to wait for the whole file to download before being able to choose viewing point</td> </tr> </tbody> </table> <p>Comparison: 1 mark per point, max 3 per method 4x1</p>	Download method	Streaming method	entire video file must be saved on user's computer before they can open and view it	file sent to the user in a constant stream so the user can start watching the video as soon as it begins downloading / can have real-time video	can view video off-line	be buffering/pausing during playback due to packet delay	available for longer /indefinitely	limited availability	user has complete control over viewing point	sometimes have to wait for the whole file to download before being able to choose viewing point	Must address both methods for max marks	(4)
Download method	Streaming method												
entire video file must be saved on user's computer before they can open and view it	file sent to the user in a constant stream so the user can start watching the video as soon as it begins downloading / can have real-time video												
can view video off-line	be buffering/pausing during playback due to packet delay												
available for longer /indefinitely	limited availability												
user has complete control over viewing point	sometimes have to wait for the whole file to download before being able to choose viewing point												

Question Number	Answer	Do not accept	Additional Guidance	Mark
4 (e)	<p>Any one reason from:</p> <ul style="list-style-type: none"> to reduce file size so that takes up less storage space so that it requires less bandwidth/is quicker to download so that it is compatible with a commonly installed player <p>1x1</p>			(1)

Question Number	Answer	
4 (f) QWC (i-iii)	<p>Indicative content for repurposing of assets:</p> <ul style="list-style-type: none"> • preparing content is time-consuming, therefore re-use saves time/money • can involve using part of an asset rather than the whole thing, e.g. an extract from a sound track in a movie trailer • establishes a common theme/consistency between products • establishes a brand 	
Level	Mark	Descriptor
	0	No rewardable content
Level 1	1-2	<p>The student makes general statements about the value of re-using work that have already been created. Examples are limited and may not be relevant.</p> <p>The student uses everyday language but their response lacks clarity and organisation. Spelling, punctuation and the rules of grammar are used with limited accuracy.</p>
Level 2	3-4	<p>The student has given a brief explanation of why re-purposing is a useful design technique, including some relevant examples.</p> <p>The student uses some specialist terms and their response shows some focus and organisation. Spelling, punctuation and the rules of grammar are used with some accuracy.</p>
Level 3	5-6	<p>The student has explained why re-purposing is a useful design technique. They use well chosen examples that clearly illustrate the value of re-purposing in different contexts.</p> <p>The student uses appropriate specialist terms consistently and the response shows good focus and organisation. Spelling, punctuation and the rules of grammar are used with considerable accuracy.</p>
		Total for question 4
		18

Question Number	Answer	Do not accept	Additional Guidance	Mark
5 (a)(i)	<p>Any two reasons from:</p> <ul style="list-style-type: none"> to show different pathways through a game to explain how a game works / show the rules to show the effect of different actions / decisions <p style="text-align: right;">2x1</p>			(2)

Question Number	Answer	Do not accept	Additional Guidance	Mark
5 (a)(ii)	<p>A description that makes reference to:</p> <ul style="list-style-type: none"> the player opens a box if there's a key in the box then the player can proceed to level 2 otherwise they must go back to start of level 1 / try another box <p>Three points in correct order - 2 marks Two points in correct order - 1 mark</p> <p style="text-align: right;">2/1/0</p>			(2)

Question Number	Answer	Do not accept	Additional Guidance	Mark
5 (a)(iii)	<p>Flowchart showing:</p> <ul style="list-style-type: none"> • box asking player to chose a token • decision box showing choice of coin or ring • box showing result of choosing ring - 100 points • box showing result of choosing coin - 25 points • arrows and labels <p style="text-align: right;">5x1</p>		Students do not have to use standard flowchart boxes providing that the process is clear	(5)

Question Number	Answer	Do not accept	Additional Guidance	Mark
5 (b)	<p>Any one reason from:</p> <ul style="list-style-type: none"> • to give an overview of how the game is organised • to show how the screens are linked <p style="text-align: right;">1x1</p>			(1)

Question Number	Answer	Do not accept	Additional Guidance	Mark
5 (c)	<p>Two sound effects that would be appropriate for the part of the game depicted by the flowcharts and identification of where they will be used.</p> <p>e.g.</p> <p>Effect - a creaking sound Where used - when the box is opened</p> <p>Effect - fanfare sound Where used - if key in the box</p> <p>Effect - buzzer Where used - when they get it wrong</p> <p style="text-align: right;">2x1</p>	<p>Unsuitable sound effects should not be credited</p>	<p>Sound effect and position (where) must be appropriately linked to award mark</p>	(2)

Question Number	Answer	
5 (d) QWC (i-iii)	<p>Indicative content for how the user interface affects the player's gaming experience</p> <p>Design of the interface affects usability, i.e. that a well designed interface will enhance enjoyment of the game and make it easier to play and that - conversely - a poor interface will often result in users abandoning an otherwise excellent game,</p> <p>How devices such as joysticks and controllers are key elements of a games interface</p> <p>Examples of good and poor features</p> <p>A good interface will support an inexperienced player, whilst maintaining the interest of a more experienced player</p> <p>Testing is key to ensuring that the user interface enhances a game rather than detracts from it.</p>	
Level	Mark	Descriptor
	0	No rewardable content
Level 1	1-2	<p>The student identifies the importance of the user interface and makes general comments about the user interface in games. They do not extend this to the impact that this has on the enjoyment of the game.</p> <p>The student uses everyday language but their response lacks clarity and organisation. Spelling, punctuation and the rules of grammar are used with limited accuracy.</p>
Level 2	3-4	<p>The student provides a clear description of the user interface and gives some examples of good and poor features of user interfaces. They include some discussion of the impact of the HCI on the experience of the game player.</p> <p>The student uses some specialist terms and their response shows some focus and organisation. Spelling, punctuation and the rules of grammar are used with some accuracy.</p>
Level 3	5-6	<p>The student provides an overview of the user interface and its key features. They relate this to games and consider the value of the HCI in games in some depth. The discussion considers how a good user interface makes a game more enjoyable and the problems when the user interface is poor.</p> <p>The student uses appropriate specialist terms consistently and the response shows good focus and organisation. Spelling, punctuation and the rules of grammar are used with considerable accuracy.</p>

Total for question 5	18
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