



# **APPLIED INFORMATION TECHNOLOGY**

## **ATAR course examination 2024**

### **Marking key**

Marking keys are an explicit statement about what the examining panel expect of candidates when they respond to particular examination items. They help ensure a consistent interpretation of the criteria that guide the awarding of marks.

Section One: Multiple-choice

15% (15 Marks)

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Question	Answer
1	d
2	a
3	d
4	c
5	b
6	b
7	c
8	d
9	a
10	b
11	b
12	a
13	d
14	c
15	a

## Section Two: Short answer

25% (55 Marks)

## Question 16

(4 marks)

- (a) Identify the project planning tool represented in the diagram. (1 mark)

Description	Marks
flowchart	1
<b>Total</b>	<b>1</b>

- (b) Explain how this tool could be used to help the developers create a digital solution. (3 marks)

Description	Marks
Explains how this tool could be used to help the developers create a digital solution	3
Describes how this tool could be used to help the developers create a digital solution	2
Makes a general comment about how this tool could be used to help the developers create a digital solution	1
<b>Total</b>	<b>3</b>
<p>Answers could include:</p> <p>A flowchart helps in the development of an application by visually mapping out the logical flow of processes, decision points, and actions, providing clarity on the structure and functionality of the application, aiding in design, analysis, and communication among development team members.</p> <p>Accept other relevant answers.</p>	

Question 17

(8 marks)

A new business is trying to establish an online presence. Describe **two** advantages and **two** disadvantages of incorporating user-generated content into a digital marketing strategy.

Description	Marks
For each advantage (2 x 2 marks)	
Describes an advantage of incorporating user-generated content into a digital marketing strategy	2
Makes a general comment about an advantage of incorporating user-generated content into a digital marketing strategy	1
<b>Subtotal</b>	<b>4</b>
For each disadvantage (2 x 2 marks)	
Describes a disadvantage of incorporating user-generated content into a digital marketing strategy	2
Makes a general comment about a disadvantage of incorporating user-generated content into a digital marketing strategy	1
<b>Subtotal</b>	<b>4</b>
<b>Total</b>	<b>8</b>
<p>Answers could include:</p> <p>Advantages:</p> <ul style="list-style-type: none"> <li>• authenticity and credibility: user-generated content is often seen as more authentic and trustworthy compared to branded content. When potential customers see real people endorsing or discussing your products/services, it can enhance your brand's credibility which in turn can influence their purchasing decisions</li> <li>• increased engagement and interaction: user-generated content can boost engagement levels significantly. When customers actively participate by sharing their experiences, opinions, or creations related to your brand, it creates a sense of involvement and community. This engagement can lead to higher levels of interaction with your brand's digital platforms, such as social media channels or forums.</li> </ul> <p>Disadvantages:</p> <ul style="list-style-type: none"> <li>• lack of control over content: there's always a risk of negative or inappropriate content being shared, which could potentially harm your brand's reputation. Maintaining quality and relevance can be challenging when content is generated by users</li> <li>• legal and copyright issues: using user-generated content may raise legal concerns regarding intellectual property rights and copyright infringement. Without proper permissions or licenses, utilising content created by users could result in legal disputes or fines. Ensuring compliance with copyright laws and having clear guidelines for users contributing content is essential to mitigate these risks.</li> </ul>	
Accept other relevant answers.	

## Question 18

(8 marks)

A school is upgrading its network. For each of the following areas of the school campus, discuss if the use of 802.3 (ethernet) or 802.11x (wireless) is more suitable.

Description	Marks
For each area of the school campus (2 x 4 marks)	
Discusses the suitability of the standard used	4
Explains the suitability of the standard used	3
Describes the suitability of the standard used	2
Makes a general comment about the standard used	1
<b>Total</b>	<b>8</b>
<p>Answers could include:</p> <ul style="list-style-type: none"> <li>computer media labs with 30 desktops: 802.3 (ethernet) is more suitable than 802.11x (wireless) as it offers higher bandwidth which is important for computer media labs where students will be accessing network resources simultaneously and will often be downloading and working with large files, streaming and creating videos. Ethernet will provide a more stable and consistent connectivity and will be less likely to experience slowdowns or congestion</li> <li>outdoor study areas: 802.11x (wireless) is more suitable as students will have mobile devices and will be difficult to run ethernet connections in an outdoor environment. 802.11x will enable students to access the university network and online resources from outdoor study areas, providing flexibility and mobility. Wi-Fi coverage will ensure that students have access to network resources regardless of their location on campus.</li> </ul>	
Accept other relevant answers.	

Question 19

(6 marks)

Describe how you would assess the verifiability, accuracy and currency of an online journal.

Description	Marks
<b>Verifiability</b>	
Describes how to assess the verifiability of an online journal	2
Makes a general comment about assessing the verifiability of an online journal	1
<b>Subtotal</b>	<b>2</b>
<b>Accuracy</b>	
Describes how to assess the accuracy of an online journal	2
Makes a general comment about assessing the accuracy of an online journal	1
<b>Subtotal</b>	<b>2</b>
<b>Currency</b>	
Describes how to assess the currency of an online journal	2
Makes a general comment about assessing the currency of an online journal	1
<b>Subtotal</b>	<b>2</b>
<b>Total</b>	<b>6</b>
<p>Answers could include:</p> <p><b>Verifiability:</b></p> <ul style="list-style-type: none"> <li>• check sources cited within the journal. These sources should be from experts in the field or from academic sources</li> <li>• check the qualifications and affiliations of the authors. Look for authors with relevant expertise and reputable affiliations.</li> </ul> <p><b>Accuracy:</b></p> <ul style="list-style-type: none"> <li>• compare findings in this journal with other reputable sources such as other publications and experts in the field</li> <li>• assess the quality of research methodologies used in the articles. Look for thoroughness, objectivity, and adherence to scientific principles.</li> </ul> <p><b>Currency:</b></p> <ul style="list-style-type: none"> <li>• find the date of the publication and determine the date of the sources cited within the journal. It is especially important to find the most up-to-date information</li> <li>• determine the frequency of publication. Journals that publish regularly are more likely to feature current developments.</li> </ul>	
Accept other relevant answers.	

## Question 20

(8 marks)

- (a) Explain **two** errors in the network diagram that will affect the overall functionality of the network. (6 marks)

Description	Marks
For each error (2 x 3 marks)	
Explains the error that will affect the overall functionality of the network	3
Describes the error that will affect the overall functionality of the network	2
Identifies an error	1
<b>Total</b>	<b>6</b>
Answers could include: <ul style="list-style-type: none"> <li>• there is no router. The router is required to allow communication between two networks. Without the router the LAN would not be able to connect to the internet</li> <li>• the wireless access point is not connected to the LAN. This will mean that all wireless devices reliant on WiFi will be unable to access network resources</li> <li>• there is no modem. The modem translates analogue to digital when connecting to copper cables.</li> </ul> Accept other relevant answers.	

- (b) In the space below, draw a diagram of a network that would ensure the LAN's efficient functionality. (2 marks)

Description	Marks
Any two of	
<ul style="list-style-type: none"> <li>• places router between the firewall and switch</li> <li>• shows the connection of the wireless access point to the LAN from the switch</li> <li>• correctly places the modem either before or after the firewall</li> </ul>	1–2
<b>Total</b>	<b>2</b>
Accept other relevant answers.	

Question 21

(10 marks)

- (a) Describe 'incremental' and 'differential' backup. (4 marks)

Description	Marks
For each definition (2 x 2 marks)	
Describes the backup technique	2
Makes a general comment on the technique	1
<b>Total</b>	<b>4</b>
Answers could include: <ul style="list-style-type: none"> <li>incremental backup only saves data that has been changed since the last backup, regardless of type of backup</li> <li>differential backup saves all data that has changed since the last full backup, each differential backup goes back to the full backup and saves all changes.</li> </ul> Accept other relevant answers.	

- (b) Contrast the effects of incremental and differential backup techniques on the following.

- Network and storage resources
  - Recovery of data
- (6 marks)

Description	Marks
Network and storage resources	
Contrasts the effects of incremental and differential backup techniques on network and storage resources	3
Describes the effects of incremental and differential backup techniques on network and storage resources	2
Makes a general comment on network and storage resources	1
<b>Subtotal</b>	<b>3</b>
Recovery of data	
Contrasts the effects of incremental and differential backups on the recovery of data	3
Describes the effects of incremental and differential backups on the recovery of data	2
Make a general comment on the recovery of data	1
<b>Subtotal</b>	<b>3</b>
<b>Total</b>	<b>6</b>
Answers could include: <ul style="list-style-type: none"> <li>network and storage resources: a differential backup consumes more storage space than an individual incremental backup and each progressive daily backup will increase in size. Daily incremental backup will only require storage for changes since the last backup, requiring less storage space each day</li> <li>recovery of data: differential backups include all changes made since a full backup, so will only require the full backup and the differential backup to restore. This will be quicker than an incremental backup as it will need to process the full backup and each daily incremental backup.</li> </ul> Accept other relevant answers.	



## Question 22

(8 marks)

Describe **one** advantage and **one** disadvantage for **two** different formats of digital publication.

Description	Marks
For each format (2 x 4 marks)	
Describes an advantage	2
Makes a general comment about an advantage	1
<b>Subtotal</b>	<b>4</b>
Describes a disadvantage	2
Makes a general comment about a disadvantage	1
<b>Subtotal</b>	<b>4</b>
<b>Total</b>	<b>8</b>
<p>Answers could include:</p> <p>PDF advantages:</p> <ul style="list-style-type: none"> <li>maintain the exact layout and design across all devices and platforms</li> <li>software to view is open source and therefore available on all platforms and free to use.</li> </ul> <p>disadvantage:</p> <ul style="list-style-type: none"> <li>is not reflowable and can be less user-friendly on small screens, such as smartphones as it does not adapt to the screen size. Users will need to scroll to read the contents.</li> </ul> <p>eBook advantages:</p> <ul style="list-style-type: none"> <li>flexible reading experiences no matter the size of the device</li> <li>allows for user preferences when it comes to text size and page visibility etc</li> <li>improved accessibility features within the eBook.</li> </ul> <p>disadvantage:</p> <ul style="list-style-type: none"> <li>requires e-reader software or a specific device to read the eBook, which may limit use of the online manual.</li> </ul> <p>Accept other relevant answers.</p>	

## Question 23

(3 marks)

Explain how a sitemap contributes to the overall functionality and user experience of a website.

Description	Marks
Explains how a sitemap contributes to the overall functionality and user experience of a website	3
Describes how a sitemap contributes to the overall functionality and user experience of a website	2
Makes a general comment about sitemaps	1
<b>Total</b>	<b>3</b>
<p>Answers could include:</p> <p>A sitemap provides a structured, hierarchical overview of the website's content, which allows users to easily navigate through different sections and pages. It helps users find the information they need quickly and efficiently. This contributes to a more user-friendly experience.</p> <p>Accept other relevant answers.</p>	

Section Three: Extended answer

20% (48 Marks)

Question 24

(48 marks)

- (a) With reference to the scenario on page 17, assess **one** impact of convergence trends in digital technologies for international visitors to the city. (4 marks)

Description	Marks
Assesses, with reference to the scenario, an impact of convergence trends for tourism in the city	4
Explains, with reference to the scenario, an impact of convergence trends for tourism in the city	3
Describes an impact of convergence trends for tourism in the city	2
Identifies a convergence trend	1
<b>Total</b>	<b>4</b>
<p>Answers could include:</p> <p>Technologies found within the smartphone will allow an international visitor to:</p> <ul style="list-style-type: none"> <li>• use GPS and apps to navigate around the city, find specific landmarks and get directions to public transport all in their own language, making the city more accessible to international visitors</li> <li>• use the camera and AR within the app to overlay information and graphics onto the real world to view through your camera. This can be used to learn about historical landmarks and see reenactments. This can be done in a visitor's own language, reducing stress when visiting the city</li> <li>• use camera and social media to upload pictures and video to social media and the app. This could inform others of places to visit and help with the analytics used by the council to improve facilities for international visitors</li> <li>• view places of interest before adding them to an itinerary to help them have the best experience of the city.</li> </ul> <p>Accept other relevant answers.</p>	

- (b) Identify **two** trends in mobile devices and discuss, using an example from the scenario on page 17, how each trend would meet the needs of tourists and/or the council. (12 marks)

Description	Marks
For each trend (2 x 6 marks)	
Identifies a trend in mobile devices	1
<b>Subtotal</b>	<b>2</b>
Uses an example from the scenario	1
<b>Subtotal</b>	<b>2</b>
Discusses how the trend would meet the needs of tourists and/or the council	4
Explains how the trend would meet the needs of tourists and/or the council	3
Describes how the trend would meet the needs of tourists and/or the council	2
Makes a general comment about how the trend would meet the needs of tourists or the council	1
<b>Subtotal</b>	<b>8</b>
<b>Total</b>	<b>12</b>

Answers could include:

GPS capabilities:

- is used by the tourists to provide personalised tours in walking trails and guide them through historical sites. AR is triggered by GPS locations to provide historical enactments, art displays and entertainment for children. The app can use locations provided by the GPS to provide information on restaurants etc. This enriches the holiday experience for the tourists
- is used by the city to track movement within the city that can be used to improve facilities such as transport, traffic movement and crowd control.

Camera:

- improvements to the camera on mobile devices enhanced engagement to capture unique experiences such as historical reenactments and superheroes on buildings with AR overlays that add interactivity and fun. The app uses image recognition to identify landmarks, artworks or historical objects providing instant information. This enhances the tourists experience in the city
- images and videos shared by tourists on the app or on social media can be used to gather valuable insights into their experiences and preferences within the city. This provides the council with the information it needs to improve amenities, marketing and visitor satisfaction.

Virtual Reality (VR):

- used at tourism information centres, where people can put on VR headsets and view popular tourists' spots to help them decide their holiday itineraries. This experience will also be available on their phones, through the app, where users will be able to access a 360 view of some popular sites. VR will also be used at various locations to make the experience more accessible for people with disabilities. This will ensure that everyone can explore the sights without barriers
- the Art and Cultural Centre will use the immersive experiences of VR to bring history and art to life. The council also hope to include VR experiences at music festivals and sport events.

4G/5G network:

- the improvements in cellular technology to 4G/5G enable fast downloading of AR content, 3D models and high-resolution videos, reducing lag or buffering during interactive experiences. This allows for the immersive AR tours or historical trails and information to be instantaneous for the tourist. 4G/5G low latency would also provide a seamless real-time translation through the app for tourists who speak another language, which will help with their overall experience in the city
- this allows the city use open areas for virtual art shows that can promote local artists and their city. The increased data capability of 5G would also allow the city to gather data within their city which may be used to predict and manage events.

Accept other relevant answers.

**Question 24** (continued)

- (c) Using an example from the scenario on page 17, evaluate the impact of digital technology on access to knowledge or resources for tourists to the city. (6 marks)

Description	Marks
<b>Evaluation</b>	
Evaluates the impact of digital technology on access to knowledge or resources for tourists to the city	5
Discusses an impact of digital technology on access to knowledge or resources for tourists to the city	4
Explains an impact of digital technology on access to knowledge or resources for tourists	3
Describes an impact of digital technology on access to knowledge or resources for tourists	2
Makes a general comment about the impact of digital technology on access to knowledge or resources	1
<b>Subtotal</b>	<b>5</b>
<b>Example</b>	
Uses an example from the scenario	1
<b>Subtotal</b>	<b>1</b>
<b>Total</b>	<b>6</b>
<p>Answers could include:</p> <ul style="list-style-type: none"> <li>• using an app on their phone and AR – tourists can gather information about historical landmarks as they walk heritage trails and entertainment for children</li> <li>• using app and GPS, tourists will be able to easily navigate around the city and be provided with real-time information about events, transportation options, special features and dining options making it easier to gather information to make travel itineraries</li> <li>• use of VR in the app and information centres to help make decisions on travel itineraries, by providing 3D views of popular tourist spots</li> <li>• use of VR at tourist spots to enhance the experience making it more accessible for those with disabilities.</li> </ul>	
Accept other relevant answers.	

- (d) Describe the process of storing data in the cloud and assess, with reference to the scenario on page 17, why the council would use the cloud for this purpose. (6 marks)

Description	Marks
<b>Description</b>	
Describes the process of storing data in the cloud	2
Makes a general comment about storing data in the cloud	1
<b>Subtotal</b>	<b>2</b>
<b>Assessment</b>	
Assesses, with reference to the scenario, why the council would use cloud storage	4
Explains, with reference to the scenario, why the council would use cloud storage	3
Describes, with reference to the scenario, why the council would use cloud storage	2
Makes a general comment about why cloud storage is used	1
<b>Subtotal</b>	<b>4</b>
<b>Total</b>	<b>6</b>
<p>Answers could include:</p> <p><b>Description:</b></p> <ul style="list-style-type: none"> <li>storing data in data centres rather than physical devices on your network, using a third-party provider, who can be accessed anytime, anywhere with an internet connection.</li> </ul> <p><b>Assessment:</b></p> <ul style="list-style-type: none"> <li>scalability: the council can expect a lot of data to be flowing in from the sensors, apps and social media that will not be connected to the edge computing. Cloud storage can be upgraded at any time and on very short notice</li> <li>cost effectiveness: the cost of using a cloud storage may be more effective as they do not have to provide the storage hardware. With the amount of data from all of the different sources, this would require a lot of hardware, set-up costs and maintenance</li> <li>as the data is coming in from a number of sources around the city, such as social media, mobile devices, GPS tracking, and other sensors it is easy to store all this data in one central location for analysis.</li> </ul> <p>Accept other relevant answers.</p>	

Question 24 (continued)

- (e) Explain the difference between UX and UI and, using **two** examples from the scenario on page 17, discuss how these concepts can be integrated into the app. (7 marks)

Description	Marks
Difference between user experience (UX) and user interface (UI)	
Explains the difference between UX and UI	3
Describes the difference between UX and UI	2
Makes a general comment about UX and/or UI	1
<b>Subtotal</b>	<b>3</b>
Discussion	
Discusses the integration of UX and UI concepts in the smart city app, using two examples from the scenario	4
Explains the integration of UX and UI concepts in the smart city app, using an example from the scenario	3
Describes the integration of UX and UI concepts in an app, using an example	2
Makes a general comment about the integration of UX and/or UI in an app	1
<b>Subtotal</b>	<b>4</b>
<b>Total</b>	<b>7</b>
<p>Answers could include:</p> <p>Difference between UX and UI:</p> <ul style="list-style-type: none"> <li>the UI are the tangible elements of an interface, the buttons, icons, graphics, layout and typography of a digital product. However, the UX is the experience a user has whilst interacting with the appt including their ease of use and satisfaction</li> <li>the objective is to provide a UX that is aesthetically pleasing, intuitive, easy to navigate and interactive. The UI elements will create this objective. A successful app requires a functional interface to produce a successful user experience.</li> </ul> <p>Integration into the app:</p> <ul style="list-style-type: none"> <li>uncluttered and clear screen as the screen on the mobile devices are small it is important to ensure that the interface is clear and uncluttered for ease of use and readability. Clear screen is especially important for GPS maps and AR overlays as they must be included on one screen and other UI should be kept to a minimum to ensure readability, which ensures a better user experience</li> <li>clear and concise content on the app with visual hierarchy as people want to be able to get information on destinations, travel options, restaurants etc quickly and easily while touring around the city. Being able to get this information quickly will enhance the user experience with the app</li> <li>language translator: the app will include the ability to change languages so that the user can listen and read information in their own language. This will improve the usability of the app for the user and enhance their experience. It will mean that they will be able to engage in all features of the app and experiences on offer by the city including real-time information on events, transportation options, historical reenactments</li> <li>navigation controls suitable for a mobile app. As all users will use a mobile device to access all features on the app, it is important that navigational controls suit this device. This may include main navigation buttons at the bottom of the interface so users can access these as they are moving around with their phones. Other navigation may include a hamburger menu that only slides out when clicked, saving space on the smaller screen. This enhances the user experience as they can access information quickly without compromising the view of features such as maps and AR content. The buttons at the bottom of the screen make it easy to access main features such as language translator etc.</li> </ul> <p>Accept other relevant answers.</p>	

- (f) Describe **two** accessibility help features that could be incorporated into the design of the app to help meet the requirements outlined in the scenario on page 17. (4 marks)

Description	Marks
For each feature (2 x 2 marks)	
Describes an accessibility help feature that could be incorporated into the design of the app to help meet the requirements outlined in the scenario	2
Outlines an accessibility help feature that could be incorporated into the design of an app	1
<b>Total</b>	<b>4</b>
<p>Answers could include:</p> <ul style="list-style-type: none"> <li>• voice navigation included with information on events and/or GPS to help people who have visual impairments. They would not have to rely on visual cues</li> <li>• haptic feedback allows people with visual impairment to receive vibrations on their phone when they are required to navigate in a certain direction</li> <li>• colour blindness support is when colours are used that are easily distinguishable from one another when viewing immersive experiences</li> <li>• voice commands allow users to control the app using their voice rather than using their hands. This would be helpful for people with motor impairments.</li> </ul> <p>Accept other relevant answers.</p>	

- (g) Explain how you could use **three** tools to evaluate the effectiveness of the app to ensure it delivers the experience outlined in the scenario on page 17. (9 marks)

Description	Marks
For each evaluation tool (3 x 3 marks)	
Explains how the tool will be used to evaluate the app	3
Describes how the tool will be used to evaluate the app	2
Makes a general comment about the evaluation tool	1
<b>Total</b>	<b>9</b>
<p>Answers could include:</p> <ul style="list-style-type: none"> <li>• self-reflection: the app designers could reflect on their own testing of the app and match it to the design brief given by the council. This would include looking at navigation, AR capabilities, user generated content and accessibility features</li> <li>• client feedback: a prototype of the app could be given to council members and a selection of locals to 'test' the app and provide feedback. This could be done by interviews with council members or asking for feedback from local testers. The client will know the expectations with regard to AR, language, interactivity and navigation features and can provide valuable feedback on their experience</li> <li>• surveys: once launched, surveys could be sent to a sample group that would include locals, interstate and international visitors to get feedback on various aspects of the app. This would be helpful in determining if features such as language converters, instructions and information are useful, helpful or enhances their experience in the city.</li> </ul> <p>Accept other relevant answers.</p>	

**Section Four: Scenario**

**40% (79 Marks)**

**Question 25**

**(79 marks)**

- (a) With reference to the website design on page 25, explain why the content has been organised in a logical and hierarchical way. (3 marks)

Description	Marks
Explains why the content has been organised in a logical and hierarchical way, with reference to the website design	3
Describes why the content has been organised in a logical and hierarchical way, with reference to the website design	2
Makes a general comment about the organisation of content in a logical and hierarchical way	1
<b>Total</b>	<b>3</b>
<p>Answers could include:</p> <p>Organising content logically and hierarchically enhances clarity, navigation, and prioritisation, guiding users through the website. This provides consistency and accessibility, resulting in a user-friendly experience that enables users to quickly find relevant information and understand content effectively. For example, starting with the website header and what the event is about and important tabs on the top right hand side and moving down to the events heading, allows users who want to participate to easily do so and ending with if you want to stay in the loop.</p> <p>Accept other relevant answers.</p>	



- (b) Critically analyse the relationship between **one** principle and **two** or more elements of design in the website design on page 25. (6 marks)

Description	Marks
Critically analyses the relationship between one principle and two or more elements of design in the website design	6
Analyses the relationship between one principle and two or more elements of design in the website design	5
Discusses the relationship between one principle and two or more elements of design in the website design	4
Explains the relationship between one principle and two or more elements of design in the website design	3
Describes the relationship between a principle and an element of design	2
Makes a general comment about a principle and element of design	1
<b>Total</b>	<b>6</b>
<p>Answers could include:</p> <ul style="list-style-type: none"> <li>emphasis is created by line and colour. The distinct colour tone changes in each section of information brings attention to each individual section. The contrast between dark and light colour tones draws attention to the overall design and creates emphasis on each section of information. The lines work to clearly show each section of information and make the design neater and more appealing. The white line that outlines the top video brings emphasis and draws the viewer's attention to it, as it is important and shows the main attraction. The contrast between the white line and dark background emphasises it further</li> <li>the principle of balance works together with the elements of shape and tone to make the website look visually pleasing. The elements of shape and tone, evident in the repetition of the three rectangles, and the tone and shape of the shaded circle behind the three rectangle information boxes, come together to create the principle of balance. The sense of balance is created through the evenly weighted rectangles as there is not an overwhelming amount of visual weight on one side of the website compared to the other. Together tone and shape interact to direct focus, create structure and achieve harmony within the design.</li> </ul> <p>Accept other relevant answers.</p>	

Question 25 (continued)

- (c) Explain **two** ways in which the website design on page 25 uses sound and/or video strategically to enhance the user experience. (6 marks)

Description	Marks
For each way (2 x 3 marks)	
Explains a way in which the website design uses sound and/or video strategically to enhance the user experience	3
Describes a way in which the website design uses sound and/or video strategically to enhance the user experience	2
Makes a general comment about a way in which the website design uses sound and/or to enhance the user experience	1
<b>Total</b>	<b>6</b>
<p>Answers could include:</p> <ul style="list-style-type: none"> <li>by having videos for the events, users can watch the videos and engage with the different events and may create excitement and entice them to sign up for the experience. If there is also sound with the videos this can further enhance the experience for the users. This may increase interactivity and user engagement</li> <li>the main video with sound on the website can set the mood and instantly engage the users and put them in the festival environment. This entices the user to stay engaged with the website and evoke emotions or set a mood.</li> </ul> <p>Accept other relevant answers.</p>	

- (d) Explain **one** feature within the website design on page 25 that promotes inclusivity. (3 marks)

Description	Marks
Explains a feature within the website design that promotes inclusivity	3
Describes a feature within the website design that promotes inclusivity	2
Makes a general comment about an inclusive feature within the website design	1
<b>Total</b>	<b>3</b>
<p>Answers could include:</p> <ul style="list-style-type: none"> <li>the 'Hear the beat' feature is designed to include and welcome the hearing impaired. The feature uses sound to create a visual showcase to the beat of the music. The aim is to include all groups of people to hear the beat of the music, to ensure that everyone can be a part of the festival, without the need for seeing, therefore promoting inclusivity</li> <li>the language selector feature allows users to choose their preferred language for engaging and interacting with the website. This allows users who speak languages other than the default one to comfortably engage in all aspects of the website which enhances user experience and promotes inclusivity.</li> </ul> <p>Accept other relevant answers.</p>	

- (e) Explain **one** feature within the website design on page 25 that promotes usability. (3 marks)

Description	Marks
Explains a feature within the website design that promotes usability	3
Describes a feature within the website design that promotes usability	2
Makes a general comment about a usable feature within the website design	1
<b>Total</b>	<b>3</b>
<p>Answers could include:</p> <p>The clear and intuitive navigation menu with descriptive and familiar labels provides an easy and efficient way to navigate the website. The information is clear and simplistic with simple language, making it convenient for users to explore information and events for the festival.</p> <p>Accept other relevant answers.</p>	

- (f) Explain **one** user-generated content feature within the website design on page 25 that would enable the target audience to interact with the festival. (3 marks)

Description	Marks
Explains a user-generated content feature within the website design that enables the target audience to interact with the festival	3
Describes a user-generated content feature within the website design that enables the target audience to interact with the festival	2
Makes a general comment about an interactive user-generated content feature within the website design	1
<b>Total</b>	<b>3</b>
<p>Answers could include:</p> <ul style="list-style-type: none"> <li>Facebook: by integrating Facebook into the festival website, users can easily share their experiences, post comments, and interact with event organisers through Facebook comments and posts. Features such as Facebook Live can also allow users to stream parts of the festival, enhancing engagement and reaching a broader audience</li> <li>Instagram: incorporating Instagram feeds and stories into the website allows users to share photos and videos using festival-specific hashtags. This not only helps promote the event but also creates a sense of community among attendees. Instagram's interactive features like polls and Q&amp;A can be embedded into the website to further engage users.</li> </ul> <p>Accept other relevant answers.</p>	

**Question 25** (continued)

- (g) (i) Layout and structure of your design. (5 marks)

<b>Description</b>	<b>Marks</b>
Produces an effective drawing/representation of the layout and structure of the banner that includes detailed, supporting annotations	5
Produces an appropriate drawing/representation of the layout and structure of the banner that includes some supporting annotations	4
Produces a rudimentary drawing/representation of the layout and structure of the banner that includes some relating annotations	3
Produces a simplistic drawing of the layout and structure of the banner that includes limited annotations	2
Produces a limited drawing of the layout and structure of the banner that has inadequate or no annotations	1
<b>Total</b>	<b>5</b>

- (ii) Elements and principles of design used and the relationship between them. (3 marks)

<b>Description</b>	<b>Marks</b>
Produces a banner with supporting annotations that describe the relationship between the elements and principles of design used	3
Produces a banner with some supporting annotations that identify the relationship between the elements and principles of design used	2
The relationship between the element and principles of design is limited or unclear	1
<b>Total</b>	<b>3</b>

- (iii) Typography used. (3 marks)

<b>Description</b>	<b>Marks</b>
Produces a banner with appropriate typography for the required information with supporting annotations that describe the typography used	3
Produces a banner with appropriate typography for the required information with some supporting annotations that identify the typography used	2
The typography used is unclear or minimal annotations provided	1
<b>Total</b>	<b>3</b>

- (h) (i) Create a storyboard with **two** frames in the spaces provided on page 32 and 33 and annotate the layout and structure of the two frames. (10 marks)

Description	Marks
For each frame (2 x 5 marks)	
Produces an effective storyboard that includes detailed, supporting annotations of the layout and structure	5
Produces an appropriate storyboard that includes some supporting annotations of the layout and structure	4
Produces a rudimentary storyboard that includes some relating annotations of the layout and structure	3
Produces a simplistic storyboard that includes limited annotations of the layout and structure	2
Produces a limited storyboard that has inadequate or no annotations	1
<b>Total</b>	<b>10</b>

- (ii) Explain the logical and hierarchical organisation of the content of your digital billboard frames. (3 marks)

Description	Marks
Explains the logical and hierarchical organisation of content of the digital billboard	3
Describes the logical and hierarchical organisation of content of the digital billboard	2
Makes a general comment about the logical or hierarchical organisation of content of the digital billboard	1
<b>Total</b>	<b>3</b>
<p>Answers could include:</p> <p>The logical and hierarchical organisation of content within the frames guides the viewer's attention and comprehension. By prioritising information logically and structuring it hierarchically, the audience can navigate through the content with ease. This organised approach provides a better understanding of the message conveyed by the digital billboard, enhancing its effectiveness in capturing the audiences' attention and encouraging further engagement.</p> <p>Accept other relevant answers.</p>	

Question 25 (continued)

- (iii) Explain the use of typography in your design. (3 marks)

Description	Marks
Explains the use of typography in the design	3
Describes the use of typography in the design	2
Makes general comment about the typography used in the design	1
<b>Total</b>	<b>3</b>
<p>Answers could include:</p> <p>Typography is used to enhance the user experience and ensure information is communicated effectively. Font styles and sizes are used to ensure content is easy to read and comprehend. Clear and legible typography enhances user's ability to understand information, promoting a positive user experience.</p> <p>Accept other relevant answers.</p>	

- (iv) Describe **two** advantages of utilising digital billboards rather than traditional print media. (4 marks)

Description	Marks
For each advantage (2 x 2 marks)	
Describes an advantage of utilising a digital billboard rather than traditional print media	2
Makes a general comment about an advantage of utilising a digital billboard rather than traditional print media	1
<b>Total</b>	<b>4</b>
<p>Answers could include:</p> <ul style="list-style-type: none"> <li>• cost efficiency: digital content such as a digital billboard eliminates the need for traditional printing, reducing the costs associated with paper and physical distribution. It is more economical to create, share and update for a large audience</li> <li>• increased visibility: digital billboards often feature bright and vivid displays that can attract attention especially in high traffic areas. Their dynamic nature and ability to display moving images or animations can stand out more than static print advertisements, increasing the visibility for the advertisement</li> </ul> <p>Accept other relevant answers.</p>	

- (i) Explain the importance of a colour scheme for website design. (3 marks)

Description	Marks
Explains the importance of a colour scheme for website design	3
Describes the importance of a colour scheme for website design	2
States the importance of a colour scheme for website design	1
<b>Total</b>	<b>3</b>
Answers could include: <ul style="list-style-type: none"> <li>the colour scheme may improve the overall appeal, usability, and experience for the client. Colour contrast is needed to ensure readability and accessibility. High-contrast colour combinations should be used for text and background elements to ensure legibility, especially for those with visual impairments</li> <li>themes and personalisation may be incorporated into the design allowing the user to personalise the colour scheme according to their preferences. A range of colour options or customisable themes may enhance user satisfaction and engagement.</li> </ul> Accept other relevant answers.	

- (j) Explain the purpose of the Web Design and Applications standard from the World Wide Web Consortium (W3C) standards for graphics. (3 marks)

Description	Marks
Explains the purpose of the Web Design and Applications standard from the W3C standards for graphics	3
Describes the purpose of the Web Design and Applications standard from the W3C standards for graphics	2
Makes a general comment about the purpose of the Web Design and Applications standard from the W3C standards for graphics	1
<b>Total</b>	<b>3</b>
Answers could include: <ul style="list-style-type: none"> <li>the purpose of the web design and applications standard from the W3C standards for graphics is to establish guidelines and specifications that promote accessibility and usability across different technologies and platforms</li> <li>W3C Standards ensure that graphics are implemented consistently across devices and browsers. These assists developers create content that will be displayed correctly, and function as intended for their target audiences, creating a positive user experience.</li> </ul> Accept other relevant answers.	

Question 25 (continued)

- (k) Explain how the navigation controls for an app would differ from those of a website. (3 marks)

Description	Marks
Explains how the navigation controls for an app would differ from those of a website	3
Describes how the navigation controls for an app would differ from those of a website	2
Makes a general comment about how the navigation controls for an app would differ from those of a website	1
<b>Total</b>	<b>3</b>
<p>Answers could include:</p> <p>The navigation controls for an app differ from a website due to its design and functionality. App navigation often utilises icons for intuitive interaction, suitable for the devices' touch interface, providing a streamlined and positive user experience compared to website navigation which relies on menus and hyperlinks for navigation.</p> <p>Accept other relevant answers.</p>	

- (l) Explain to the event manager for Harmony Horizon Festival **three** security measures that can be implemented to ensure that the processing of customer data via the website and app is secure. (9 marks)

Description	Marks
For each security measure (3 x 3 marks)	
Explains a security measure that ensures the processing of customer data is secure	3
Describes a security measure that ensures the processing of customer data is secure	2
Outlines a security measure	1
<b>Total</b>	<b>9</b>
<p>Answers could include:</p> <ul style="list-style-type: none"> <li>• encryption: this involves encrypting data from the point of entry, such as when a customer submits information through a website or app. This ensures that data is protected, making it unreadable to anyone who does not have the decryption keys, therefore safeguarding it from unauthorised access</li> <li>• passwords: implementing strong password policies ensures that users create complex passwords that are difficult to guess. This includes requirements for a mix of uppercase and lowercase letters, numbers, and special characters</li> <li>• antivirus software: antivirus software provides real-time protection by constantly scanning for malicious activities and preventing malware from executing. This proactive approach helps to safeguard sensitive customer data during processing.</li> </ul> <p>Accept other relevant answers.</p>	



- (m) Explain **one** advantage for local outsourcing and **one** advantage for global outsourcing in terms of how it may contribute to the overall efficiency and effectiveness of the design process. (6 marks)

Description	Marks
For each advantage (2 x 3 marks)	
Explains an advantage for local/global outsourcing in terms of how it may contribute to the overall efficiency and effectiveness of the design process	3
Describes an advantage for local/global outsourcing in terms of how it may contribute to the overall efficiency and effectiveness of the design process	2
Makes a general comment about outsourcing	1
<b>Total</b>	<b>6</b>
<p>Answers could include:</p> <p>Local outsourcing:</p> <ul style="list-style-type: none"> <li>an advantage of local outsourcing is the shared cultural and linguistic context between the client and the outsourcing partner. This improves communication and understanding of project requirements which will make it a smoother process for Harmony Horizon Festival.</li> </ul> <p>Global outsourcing:</p> <ul style="list-style-type: none"> <li>an advantage of global outsourcing is the increased diversity of skill for specialised expertise. This allows the organisers of Harmony Horizon Festival to select a designer based on specific project requirements and desired skill level enabling them to find the best-suited design expert for their project. This enhances efficiency and effectiveness as they can access niche skills, innovative perspectives that may not be available locally or within their business.</li> </ul> <p>Accept other relevant answers.</p>	

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