



L-Università
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MATSEC
Examinations Board



Marking Scheme

SEC Information Technology Unit 2

Main Session 2024
12th May 2023

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Marking Scheme (Main Session 2024): SEC Information Technology Unit 2

Criteria Reference	The candidate should be able to:	Question Number	Maximum marks that can be achieved	Allocation of marks NOT to be subdivided any further than indicated below	Example of Expected Answer
K-1		Q1	4		
	MQF 1: List the different types of media.	1a	1	Award 0.5 marks for each correct type of media listed.	<p>Students are expected to list TWO different types of media. The following are possible answers:</p> <ul style="list-style-type: none"> • Text • Animation • ABS/PLA filament <p>Other valid answers, except for audio, images, and video, are also to be accepted.</p>
	MQF 2: Relate the different types of media with the human senses.	1b	1	Award 0.5 marks for each correctly related type of media with the human senses.	<p>Students are expected to relate each of the TWO given types of media with one of the human senses. Possible answers include:</p> <p><i>Human sense related to images:</i> Sight <i>Human sense related to audio:</i> Hearing</p>
	MQF 3: Identify the hardware required for specific media.	1c	2	Award 0.5 marks for each correctly identified hardware device.	<p>Students are expected to identify TWO hardware devices for each of the TWO given types of media. Possible answers include:</p> <p><i>Hardware required for images:</i> Printer OR monitor OR scanner OR graphics tablet OR digital camera <i>Hardware required for audio:</i> Speakers OR microphone OR MIDI keyboard</p> <p>Other valid answers are also to be accepted.</p>

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K-2		Q2	4		
	MQF 1: State the main characteristics of image formats.	2a	1	Award 0.25 marks for each correct image format characteristic stated.	<p>Students are expected to state FOUR main characteristics of image formats. Characteristics can be listed in any order. The following are possible answers:</p> <ul style="list-style-type: none"> • Compression • Compatibility • Image size • Resolution <p>Other valid answers, except for colour depth and vector/raster, are also to be accepted.</p>
	MQF 2: Identify the characteristics of an image format.	2b	1	Award 0.5 marks for each correct image characteristic identified.	<p>Students are expected to identify the TWO main characteristics, colour depth and vector/raster, for the given image. The answers are:</p> <p><i>Colour depth: 8</i></p> <p><i>Vector/Raster: Raster</i></p>

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	MQF 3: Describe the characteristics of an image format.	2c	2	Award 1 mark for each correct image characteristic described.	<p>Students are expected to describe colour depth and vector/raster as characteristics of GIF images. The following are possible answers:</p> <p><i>Colour depth:</i> This characteristic refers to the number of bits used to represent the colour of one pixel. It determines the maximum number of colours that can be represented by a pixel. Therefore, the larger the colour depth, the more shades of colour are available.</p> <p><i>Vector/Raster:</i> This characteristic refers to how an image is composed. A vector image is made up of paths/lines, while a raster image is made up of pixels/dots. Unlike raster images, the edges of vector images remain smooth when scaled.</p> <p>Other valid answers are also to be accepted.</p>
K-4		Q3	4		
	MQF 1: Name different audio file characteristics.	3a	1	Award 0.5 marks for each correct audio file characteristic named.	<p>Students are expected to name TWO characteristics of audio formats.</p> <p>Possible answers include:</p> <ul style="list-style-type: none"> • Bitrate • Compression <p>Other valid answers are also to be accepted. If students refer to compression as 'lossy/lossless/uncompressed', then this is not to be considered as valid.</p>

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	MQF 2: Relate between different types of audio files and their characteristics.	3b	1	Award 0.25 marks for each correctly related audio file type to its characteristic.	<p>Students are expected to relate the FOUR given audio file types to the appropriate statement stating their characteristics. The answers are:</p> <ul style="list-style-type: none"> i. ALAC ii. WAV iii. LPCM iv. AAC
	MQF 3: Describe the different audio file characteristics.	3c	2	Award 1 mark for each correct audio file characteristic described.	<p>Students are expected to describe the TWO audio file characteristics named in Question 3a. The following are possible descriptions:</p> <p><i>Bitrate:</i> Bitrate is the amount of data transferred into audio, over a period of time. It is generally measured in kilobits per second (kbps). A higher bitrate implicates better audio quality.</p> <p><i>Compression:</i> Compression refers to the reduction of the overall file size. There are various types of compression mechanisms: lossless compression where files retain the same quality and lossy compression where the quality of the audio file is reduced.</p> <p>Other valid answers are also to be accepted.</p>

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K-5		Q4	4		
	MQF 1: Name different video file characteristics.	4a	1	Award 0.5 marks for each correct video file characteristic named.	<p>Students are expected to name TWO characteristics of video files. The following are possible answers:</p> <ul style="list-style-type: none"> • Compression • Bitrate • Frame rate • Duration (length) <p>Other valid answers, except for aspect ratio and frame dimensions, are also to be accepted.</p>
	MQF 2: Identify the characteristics of a given video file type.	4b	1	Award 0.5 marks for each correct video file characteristic identified.	<p>Students are expected to identify the TWO characteristics, aspect ratio and frame dimensions, for the given video file. The answers are:</p> <p><i>Aspect ratio:</i> 90:67 <i>Frame dimensions:</i> 720 x 536</p>
	MQF 3: Describe the different video file characteristics.	4c	2	Award 1 mark for each appropriate description.	<p>Students are expected to describe the TWO characteristics of aspect ratio and frame dimensions. The following are possible answers:</p> <p><i>Aspect ratio:</i> Aspect ratio refers to the proportional relationship between the width of the video to the height of the same video.</p> <p><i>Frame dimensions:</i> Frame dimensions refers to the actual size of the video frame, that is the actual width and height of the video frame. This is typically measured in pixels.</p> <p>Other valid answers are also to be accepted.</p>

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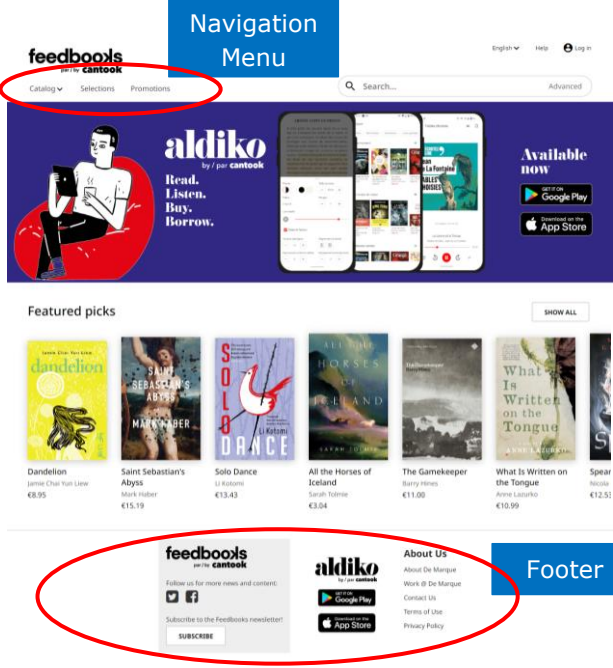
Criteria Reference	The candidate should be able to:	Question Number	Maximum marks that can be achieved	Allocation of marks NOT to be subdivided any further than indicated below	Example of Expected Answer
C-3		Q5	6		
	MQF 1: Explain the limitations of a given audio and video file for a given scenario.	5a	2	Award 1 mark for each correct limitation explained.	<p>Students are expected to explain ONE limitation of .alac audio files and ONE limitation of .mkv video files with respect to the provided scenario. The following are possible answers:</p> <p><i>Explanation of .alac limitation:</i> .alac audio files are not ideal for files to be uploaded online. This is so since while .alac files provide very good quality sound, they tend to be large in size as they use lossless compression. Hence, they take long to upload.</p> <p><i>Explanation of .mkv limitation:</i> .mkv video files are not recommended to upload video content online. This is so since they tend to be large in size given that they support high definition videos and at the same time use lossless compression.</p> <p><i>Note: If different or same limitations are explained for the different file types, students should still be awarded marks.</i></p> <p>Other valid answers are also to be accepted.</p>
	MQF 2: Justify an appropriate audio and video file for a given scenario.	5b	2	Award 1 mark for each appropriate justification.	<p>Students are expected to justify why .mp3 audio files and .ogg video files are more appropriate with respect to the provided scenario. The following are possible answers:</p>

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					<p><i>Justification of .mp3 audio file:</i> It is better to use .mp3 files to store audio intended to be uploaded online rather than .alac files. Unlike .alac files, .mp3 files use lossy compression allowing for smaller file sizes and hence faster uploads/downloads. Still the overall sound quality of .mp3 files is good for online content.</p> <p><i>Justification of .ogg video file:</i> For this situation, .ogg video files are more appropriate than .mkv files since .ogg files are ideal for online streaming. Even though .ogg files are small in size, and hence ideal for upload, they still offer high-quality images.</p> <p><i>Note: If different or same limitations are explained, students should still be awarded marks.</i></p> <p>Other valid answers are also to be accepted.</p>
	MQF 3: Justify an appropriate container for a given scenario.	5c	2	Award 1 mark for each appropriate justification.	<p>Students are expected to justify why .mp4 video containers are more appropriate than .avi video containers for the given scenario, based on <i>file size</i> and <i>compatibility</i>. The following is a possible justification:</p> <p><i>Justification based on file size:</i> .avi containers usually occupy more storage capacity than .mp4 containers since the data in a .avi container tends to be less compressed. Hence, .mp4 containers are easier to upload and stream</p>

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					<p><i>Justification based on compatibility:</i> .mp4 files are compatible with almost all devices/media players, unlike .avi containers which are limited to a few devices/media players. Hence it is better to opt for .mp4 as one can rest assured that the content in the container will play without any issues.</p> <p>Other valid answers are also to be accepted.</p>
		Q6	4		
K-7	MQF 1: List the basic elements of a website.	6a	1	Award 0.5 marks for each correct element listed.	<p>Students are expected to list TWO basic elements of a website apart from header and main content. The following are possible answers:</p> <ul style="list-style-type: none"> • Navigation menu • Footer
	MQF 2: Identify the basic elements of a given website.	6b	1	Award 0.5 marks for each correct element, listed in Question 6a, identified.	<p>Students are expected to identify the TWO basic elements of a website they listed in Question 6a.</p>

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					 <p>The screenshot shows the feedbooks website. A blue box labeled "Navigation Menu" highlights the top navigation bar with links for "Catalog", "Selections", and "Promotions". Another blue box labeled "Footer" highlights the bottom section, which includes social media icons, a newsletter subscription form, and "About Us" information. The main content area features a banner for "aldiko by par cantook" and a "Featured picks" section with book covers and titles like "Dandelion", "Saint Sebastian's Abyss", "Solo Dance", "All the Horses of Iceland", "The Gamekeeper", and "What Is Written on the Tongue".</p> <p>Note: If students refer to 'Element 1' and 'Element 2' (referring to Question 6a) rather than 'Navigation Menu' and 'Footer', marks should still be awarded as long as the correct elements are identified.</p>

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	MQF 3: Outline the purpose of the basic elements of a website.	6c	2	Award 1 mark for each correctly outlined purpose.	<p>Students are expected to outline the purpose of the TWO basic elements of a website they listed in Question 6a. The following are possible answers:</p> <p><i>Navigation menu:</i> The navigation menu consists of a set of hyperlinks to other webpages within the website which allow users to move from one webpage to another.</p> <p><i>Footer:</i> The footer is the bottom part of the webpage. It generally contains information such as sitemap, contact information and social media icons.</p> <p>Other valid answers are also to be accepted.</p>
		Q7	6		
C-4	MQF 1: Select appropriate elements for a given scenario.	7a	2	Award 1 mark for each appropriate element selected.	<p>Students are expected to select the appropriate header and main content for the website. The answers are:</p> <ul style="list-style-type: none"> • Header 2 • Main Content 2
	MQF 2: Justify the appropriate elements for a given scenario.	7b	2	Award 1 mark for each correct justification.	<p>Students are expected to justify the TWO elements selected in Question 7a. The following are possible answers:</p> <p><i>Justification of Header:</i> Since the website is intended for children, Header 2 is more appropriate since it makes use of images which are more adequate for children.</p>

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					<p>Moreover, there is no need for links to social media platforms.</p> <p><i>Justification of Main Content:</i> While Main Content 1 is also a website intended to encourage people to read, its simplistic design is not appealing to children, making it more appropriate for adults. On the other hand, the design of Main Content 2, with its images and choice of font, attracts children to the page. It also gives users the possibility to listen to the story while following the text. So, Main Content 2 is more adequate for this situation.</p> <p>Other valid answers are also to be accepted.</p>
	MQF 3: Argue whether the website should be static or dynamic for a given scenario.	7c	2	Award 2 marks for an appropriate argumentation stating that the website should be static.	<p>Students are expected to provide adequate arguments in favour of a static website. The following is a possible answer:</p> <p>For this scenario, a static website is better than a dynamic website. This is because the website does not require users to log in to access the e-books as these are free for all. Moreover, a personalised account, which is only available through a dynamic website, is not required. Hence, it is best for 'Let's Read' to develop a static website.</p> <p>Other valid answers are also to be accepted.</p>

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K-9		Q8	4		
	MQF 1: Define HTML and its use.	8a	1	<p>Award 0.5 marks for a correct definition.</p> <p>Award 0.5 marks for a correct use.</p>	<p>Students are expected to define HTML and its use. The following is a possible answer:</p> <p><i>Definition:</i> HTML (Hypertext Markup Language) is a standard markup language.</p> <p><i>Use:</i> It is used to develop the structure of the web pages and define their content.</p> <p>Other valid answers are also to be accepted.</p>
	MQF 2: List HTML tags.	8b	1	<p>Award 0.25 marks for each correct HTML tag listed.</p>	<p>Students are expected to list ONE HTML basic tag, ONE HTML element tag and TWO HTML 5 tags.</p> <p>The following are possible answers for HTML basic tags:</p> <ul style="list-style-type: none"> • <html> • <head> • <title> • <body> • <h>/<h1> • <p> <p>The following are possible answers for HTML element tags:</p> <ul style="list-style-type: none"> •
 • <hr> • • <!--> • • • • <table> • <th> • <tr> • <td> • <div>

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					<p>The following are possible answers for HTML 5 tags:</p> <ul style="list-style-type: none"> • <article> • <aside> • <dialog> • <figure> • <footer> • <header> • <main> • <nav> • <section> <p><i>Note: If the angle brackets (<>) are not included, marks should still be awarded.</i></p> <p>Other valid answers, except for <a> and <link>, are also to be accepted.</p>
	MQF 3: Relate attributes to the respective HTML tags.	8c	2	Award 0.5 marks for each correctly related attribute to its respective HTML tag.	<p>Students are expected to relate the FOUR given attributes to the appropriate statement defining their use in relation to the HTML tag. The answers are:</p> <ol style="list-style-type: none"> i. href ii. class iii. target iv. rel

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K-10		Q9	4		
	MQF 1: Define CSS and its use.	9a	1	Award 0.5 marks for each part of the definition.	<p>Students are expected to define CSS and its use. The following is a possible answer:</p> <p><i>Definition:</i> CSS (Cascading Style Sheets) is a language used in conjunction with HTML to separate the design of a webpage from its content.</p> <p><i>Use:</i> This allows for better control over the layout and presentation of the HTML.</p> <p>Other valid answers are also to be accepted.</p>
	MQF 2: Distinguish between different types of CSS.	9b	1	Award 1 mark for appropriately distinguishing between external and inline CSS.	<p>Students are expected to distinguish between external and inline CSS. The following is a possible answer:</p> <p>When using external CSS, styles are defined in a separate CSS file which is then linked to one or more HTML files, hence affecting the style of the entire website. On the other hand, when using inline CSS, styling is only applied to a specific element on the webpage and not to other similar elements within the same page or other webpages.</p> <p>Other valid answers are also to be accepted.</p>

Criteria Reference	The candidate should be able to:	Question Number	Maximum marks that can be achieved	Allocation of marks NOT to be subdivided any further than indicated below	Example of Expected Answer
	MQF 3: Outline CSS selectors and declarations.	9c	2	Award 0.5 marks for each CSS selector and declaration correctly outlined.	<p>Students are expected to outline the FOUR given CSS selectors and declarations. The following are possible answers:</p> <ul style="list-style-type: none"> i. The # (id selector) indicates that the HTML element with id equal to <i>image1</i> will be styled according to the declarations contained within the curly brackets. ii. The border declaration is used to set a red dotted border around the image. iii. The padding declaration creates a space of 5px between the image and its border. iv. The width declaration specifies that the image should have a width of 500px. <p>N.B.: For Question 9c (ii) to (iv) a general outline of the declarations should not be accepted. Marks should only be awarded if the outline provided by the student refers to the value of the declaration as per given code snippet.</p> <p>Other valid answers are also to be accepted.</p>