

# MARKING SCHEME

## SEC INFORMATION TECHNOLOGY UNIT 2

MAIN 2018



**L-Università  
ta' Malta**

**MATSEC  
Examinations Board**

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Marking schemes published by the MATSEC Examination Board are not intended to be standalone documents. They are an essential resource for markers who are subsequently monitored through a verification process to ensure consistent and accurate application of the marking scheme.

In the case of marking schemes that include model solutions or answers, it should be noted that these are not intended to be exhaustive. Variations and alternatives may also be acceptable. Examiners must consider all answers on their merits, and will have consulted with the MATSEC Examinations Board when in doubt.

MARKING SCHEME: SEC INFORMATION TECHNOLOGY UNIT 2 (MAIN 2018)

Question 1	K1	Describe different multimedia systems.	4 marks	
			Mark	Total
a	<p>Student is expected to provide a valid description of a simulation. A typical answer might be as follows.</p> <p>A simulation is the use of a computer to imitate a real-life process or system.</p>		1 mark for valid explanation	1
b	<p>Student is expected to provide a valid description of CAD. A typical answer might be as follows.</p> <p>CAD or Computer Aided Design is the use of computer software to create and edit technical drawings and documentation. These designs can be created in both 2D and 3D.</p>		1 mark for valid explanation	1
c	<p>Student is expected to provide a valid description of CBT. A typical answer might be as follows.</p> <p>CBT stands for Computer Based Training and refers to any course which is delivered via the execution of a special training program on a computer device.</p>		1 mark for valid explanation	1
d	<p>Student is expected to provide a valid description of Information Kiosks. A typical answer might be as follows.</p> <p>A computer terminal featuring specialised hardware and software designed within a public exhibit that provides access to information.</p>		1 mark for valid explanation	1

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Question 2	K2	List the format of different multimedia components.	4 marks																					
			Mark	Total																				
			Images: 0.25 marks for every correct file format	1																				
		<table border="1"> <thead> <tr> <th>Images</th> <th>Audio</th> <th>Video</th> <th>Animation</th> </tr> </thead> <tbody> <tr> <td>jpeg</td> <td>mp3</td> <td>avi</td> <td>gif</td> </tr> <tr> <td>png</td> <td>flac</td> <td>mp4</td> <td>swf</td> </tr> <tr> <td>tiff</td> <td>vob</td> <td>h.264</td> <td>flv</td> </tr> <tr> <td>pdf</td> <td>ogg</td> <td>mkv</td> <td>swi</td> </tr> </tbody> </table>	Images	Audio	Video	Animation	jpeg	mp3	avi	gif	png	flac	mp4	swf	tiff	vob	h.264	flv	pdf	ogg	mkv	swi	Audio: 0.25 marks for every correct file format	1
Images	Audio	Video	Animation																					
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pdf	ogg	mkv	swi																					
			Video: 0.25 marks for every correct file format	1																				
			Animation: 0.25 marks for every correct file format	1																				
Question 3	K3	Relate between different image file types with their qualities.	4 marks																					
			Mark	Total																				
		<table border="1"> <tbody> <tr> <td>a. BMP</td> <td>Raster</td> <td>Lossless</td> </tr> <tr> <td>b. JPEG</td> <td>Raster</td> <td>Lossy</td> </tr> <tr> <td>c. PDF</td> <td>Vector</td> <td>Lossless</td> </tr> <tr> <td>d. PNG</td> <td>Raster</td> <td>Lossless</td> </tr> </tbody> </table>	a. BMP	Raster	Lossless	b. JPEG	Raster	Lossy	c. PDF	Vector	Lossless	d. PNG	Raster	Lossless	0.5 each for each correct quality	4								
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Question 4	K6	Relate between different types of video files and their characteristics.	4 marks	
			Mark	Total
A		WMV files are <u>smaller</u> than AVI files.	1	1
B		H.264 and MKV are both <u>lossy</u> file formats.	1	1
C		AVI videos have <u>better</u> quality than MP4.	1	1
D		MPEG is a <u>lossy</u> file format	1	1

Question 5	K7	Define audio related terminology.	4 marks	
			Mark	Total
A		Student is expected to provide a valid definition of bass. A typical example follows: Bass describes tones of low frequency.	1 mark	1
B		Student is expected to provide a valid definition of mixing. A typical example follows: Mixing is the process by which multiple sounds are combined into one or more channels.	1 mark	1
C		Student is expected to provide a valid definition of amplification. A typical example follows: Amplification is the process of making the sound louder.	1 mark	1
D		Student is expected to provide a valid definition of a compression. A typical example follows: A process that reduces the transmission bandwidth and storage requirements of audio data.	1 mark	1

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Question 6	K8	Define video related terminology.	4 marks	
			Mark	Total
a)	Student is expected to provide a valid definition of a Transition. A typical example follows: The way in which you move from one video shot to another.		1	1
b)	Student is expected to provide a valid definition of a wipe. A typical example follows: When a shot is progressively replaced by another using some type of geometric pattern.		1	1
c)	Student is expected to provide a valid definition of a sequence. A typical example follows: A sequence is a series of shots edited together to tell a story.		1	1
d)	Student is expected to provide a valid definition of a fade in/ fade out. A typical example follows: A transition effect whereby a picture or scene gradually appears on screen and then gradually disappears.		1	1

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Question 7	K10	List the advantages of using CSS with HTML.	4 marks																									
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<table border="1"> <tr> <td>a.</td> <td>CSS makes it easier to maintain websites.</td> <td>✓</td> </tr> <tr> <td>b.</td> <td>CSS is used to structure the website while HTML is used for its presentation.</td> <td></td> </tr> <tr> <td>c.</td> <td>Using CSS with HTML makes designing websites more consistent.</td> <td>✓</td> </tr> <tr> <td>d.</td> <td>It is easier to update code that uses internal CSS.</td> <td></td> </tr> <tr> <td>e.</td> <td>CSS provides more formatting options than HTML on its own.</td> <td>✓</td> </tr> <tr> <td>f.</td> <td>CSS can be used both within the HTML code (internal) as well as a separate file (external).</td> <td>✓</td> </tr> <tr> <td>g.</td> <td>All CSS code is supported by all the browsers.</td> <td></td> </tr> <tr> <td>h.</td> <td>Internal CSS is preferred to external CSS.</td> <td></td> </tr> </table>			a.	CSS makes it easier to maintain websites.	✓	b.	CSS is used to structure the website while HTML is used for its presentation.		c.	Using CSS with HTML makes designing websites more consistent.	✓	d.	It is easier to update code that uses internal CSS.		e.	CSS provides more formatting options than HTML on its own.	✓	f.	CSS can be used both within the HTML code (internal) as well as a separate file (external).	✓	g.	All CSS code is supported by all the browsers.		h.	Internal CSS is preferred to external CSS.		1 mark for each correct answer	4
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Question 8	C3	Justify the most appropriate audio and video files for a given scenario.	6 marks	
			Mark	Total
a.	MP4		1	1
b.	A typical answer might be as follows: MP4 provides videos with the best quality to size ratio.		1	1
c.	A typical answer might be as follows: If a video with a different aspect ratio is uploaded YouTube will either add black bars at the top and bottom or left and right to make the video a 16:9.		2	2
d.	AAC		1	1
e.	A typical answer might be as follows: AAC generally offers higher quality sound than MP3 while being approximately the same size.		1	1

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Question 9	C5	Explain different HTML tags and their respective attributes in a given code snippet.	6 marks	
			Mark	Total
a.		<td>	0.5	0.5
b.		<tr>	0.5	0.5
c.		A typical answer might be as follows: Different heading tags have different styling elements to make them look different.	1	1
d.		A typical answer might be as follows: ALT is used to specify an alternate text for the image.	0.5	0.5
e.		<a>	0.5	0.5
f.		<link>	0.5	0.5
g.		A typical answer might be as follows: The <html> tag is used to let the browser know that the document contains HTML. It is the container for all the other HTML elements excluding DOCTYPE.	0.5	0.5
h.		A typical answer might be as follows: The class attribute specifies one of more names for an HTML element.	1	1
i.		A typical answer might be as follows: The <head> element can include: <ul style="list-style-type: none"> <li>• a title for the document,</li> <li>• scripts,</li> <li>• styles</li> <li>• meta information.</li> </ul>	0.25 for each point mentioned	1