MATRICULATION AND SECONDARY EDUCATION CERTIFICATE EXAMINATIONS BOARD
UNIVERSITY OF MALTA, MSIDA

SECONDARY EDUCATION CERTIFICATE LEVEL

MAY 2016

SUBJECT:	**Information Technology**
PAPER NUMBER:	Controlled – Unit 2
DATE:	1st June 2016
TIME:	10:00 a.m. to 11:35 a.m.

THIS PAPER SHOULD BE RETURNED TO THE INVIGILATOR AFTER THE EXAMINATION.

Name of candidate _____

I.D. number _____

School _____

Class _____

Notes to Students:

- Answer all questions in the space provided.

Scenario

A local audio-visual production company, "VisualWave Company", has just been set up in your locality. They have engaged you in order to help them understand a number of technical issues related to their professional environment.

Question 1   **K1 (4 marks)**

Provide the appropriate information to VisualWave Company, by briefly describing the following multimedia systems:

a. Websites

_____

_____

_____

_____

b. Social Media

_____

_____

_____

_____

c. Virtual Reality

_____

_____

_____

_____

d. Holograms

_____

_____

_____

_____

e. Information Kiosks

_____

_____

_____

_____

Question 2   **K2 (4 marks)**

Fill in the table below in order to provide information to VisualWave Company with regards to various formats used in different circumstances. List **four** different formats for each of the following multimedia components. Four formats have been provided as an example.

Multimedia Component	Format 1	Format 2	Format 3	Format 4
Text	txt			
Images	jpeg			
Audio	mp3			
Video	avi			
Animation				

Please turn the page.

Question 3 K3 (4 marks)

Along the years different image file types have been created in order to fulfil different criteria and image quality considerations. Fill in the table below by ticking in the appropriate boxes so that VisualWave Company can have a summary of the main image quality criteria associated with the following image file types.

Image File Type	Lossy	Lossless	Uncompressed	Raster	Vector
jpeg					
png					
tiff					
bmp					

Question 4 K6 (4 marks)

Name **two** characteristics of the following video file types:

a. MKV:

_____

_____

_____

_____

b. MOV:

_____

_____

_____

_____

c. MPEG:

_____

_____

_____

_____

d. MP4:

_____

_____

_____

_____

Question 5 **K7 (4 marks)**

The following is a list of the audio related terminology. According to your expertise, match the definitions below to one of the terminologies listed.

amplification	threshold	pitch	reverb	echo	tempo	noise removal
cross fade	equalization	delay	inversion	loop	multichannel	bass
treble	compression	mixing	splitting	clipping		

a. The process of making a sound louder.

_____

b. Tones whose frequency or range are at the higher end of human hearing. In music, this corresponds to high notes.

_____

c. The persistence of sound after a sound is produced.

_____

d. An audio effect which records an input signal to an audio storage medium, and then plays it back after a period of time.

_____

e. The process by which multiple sounds are combined into one or more channels.

_____

f. The process of making a sound heard gradually as another disappears or becomes silent.

_____

g. The amplitude adjustment of audio signals at particular frequencies.

_____

h. A form of waveform distortion that occurs mostly due to amplifier issues.

_____

i. A process that reduces the transmission bandwidth and storage requirements of audio data.

_____

j. Tones of low frequency.

_____

Question 6   K8 (4 marks)

VisualWave Company are also interested in video productions. Provide them with the right information by giving them an accurate definition of the following video related terminology:

a. 4K

_____

_____

_____

_____

b. Fade in/fade out

_____

_____

_____

_____

c. Wipe

_____

_____

_____

_____

d. Aspect Ratio

_____

_____

_____

_____

e. PAL/NTSC

_____

_____

_____

_____

Question 7   **C3 (6 marks)**

VisualWave Company would like to share sample music through their newly set up website. They asked you to identify which audio and video formats would you recommend.

a. VisualWave Company is emphasising on the quality of the audio. VisualWave is requesting quality to be the highest possible and at the same time they would like the file sizes to be adequate for online streaming. Audio file type chosen should be compatible with the largest number of devices possible. Take into consideration the following audio formats MP3, FLAC, WAV or AAC.

Which file type would you recommend? Give **two** reasons for your answer.

File type recommended: _____

Reason 1: _____

_____

_____

Reason 2: _____

_____

_____

_____

b. VisualWave Company would like to stream video clips online. The company is requesting high quality and an adequate size of the video clips to be streamed online. A lossy compression file type needs to be identified. Apart from this they would like to use a format that supports various aspect ratios. Take into consideration the following formats MP4, WMV, H.264 or MOV.

Which file type would you recommend? Give two reasons for your answer.

File type recommended: _____

Reason 1: _____

_____

_____

_____

Reason 2: _____

_____

_____

_____

Question 8 K10 (4 marks)

During the business review you were asked to present the advantages of CSS when designing a website. Your task is to describe four advantages regarding to CSS

Advantage 1: _____

Advantage 2: _____

Advantage 3: _____

Advantage 4: _____

Question 9   **C5 (6 marks)**

The following HTML code is an early draft of VisualWave Company's website front page. Review the HTML code below and answer the following questions.

```
1    <html>
2      <head>
3      </head>
4
5      <body>
6        <h1>VisualWave Malta</h1>
7
8        <p>Welcome to our page. Feel free to browse the links</p>
9        <hr>
10
11       <div id='products'>
12         <p>We produce:</p>
13         <ol>
14           <li>Audio material</li>
15           <li>Video material</li>
16         </ol>
17       </div>
18
19       <img src="logo.jpg" alt="This is the logo of VisualWave">
20
21     </body>
22   </html>
23   |
```

a. What is the purpose of the **<html>** tag in line 1?

_____

_____

b. What is the output of the **<h1>** tag in line 6?

_____

_____

c. What is the use of the **<p>** tag as found in line 8?

_____

_____

d. What is the **<hr>** tag used for?

_____

_____

e. What is the output of the code in the lines 13 to 16?

_____

_____

_____

_____

f. How would the output differ if the **<ol>** tag would be replaced with a **<ul>** tag?

_____

_____

_____

g. What is the purpose of the **id** attribute as used in the **<div>** tag on line 11?

_____

_____

_____

_____

h. What is the purpose of the **alt** attribute within the **<img>** tag on line 19?

_____

_____

_____

i. What is the difference between the **id** and the **class** attributes?

_____

_____

_____

_____

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