

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:	1 st 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.

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

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   
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 **** tag would be replaced with a **** 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 **** tag on line 19?

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

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