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

SECONDARY EDUCATION CERTIFICATE LEVEL

SEPTEMBER 2016

SUBJECT:	**Information Technology**
PAPER NUMBER:	Synoptic – Unit 2
DATE:	1st November 2016
TIME:	10:00 a.m. to 12:05 p.m.

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

Notes to Students:

- Answer all questions in the space provided

Scenario

VisualWave is a new company operating locally which intends to start creating audio/visual. Since they have just started operating they need to market their service to explain to prospective clients what VisualWave is able to produce.

Question 1   **K1 (4 marks)**

During a recent meeting of VisualWave's board of directors they have asked you to provide answers for the following questions:

a. Describe **three** advantages provided by websites.

_____

_____

_____

b. List **two** examples of social media.

_____

_____

_____

c. Describe **three** scenarios where virtual reality can be implemented.

_____

_____

_____

_____

Question 2   **K2 (5 marks)**

The board of directors are not necessary very familiar with ICT terms and jargon. In fact, they require your help in order to sort through the following list of popular formats in use today:

docx, bmp, wav, jpeg, sub, aac, mov, swf, mp4, gif

a. Select **two** formats which are associated with text.

_____

b. Select **two** formats which are associated with images.

_____

c. Select **two** formats which are associated with audio.

_____

d. Select **two** formats which are associated with video.

_____

e. Select **two** formats which are associated with animations.

_____

Please turn the page.

Question 3   **C1 (5 marks)**

VisualWave are involved in a project which is intended for an audience aged between 14 and 18 years. The client has a budget of €5000 in order to create a multimedia project within a period of three months. VisualWave has a good choice of software availability; including video editing, image editing, audio editing and web development tools.

Based on the above scenario; justify, by giving **five** reasons, the most appropriate multimedia project for this client.

_____

_____

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Question 4   **K3 (9 marks)**

Help VisualWave understand better file types related to images and related technical terms.

a. Fill in the following table by ticking in the correct columns with information describing different image file types and their qualities. You are required to show whether a particular image file type is compressed or uncompressed and whether it is a raster or a vector type.

Image File Type	Compressed	Uncompressed	Raster	Vector
JPEG				
PNG				
BMP				
TIFF				

b. Describe the following terms as related to images:

i.   Resolution

_____

_____

_____

ii. Colour depth

_____

_____

_____

Please turn the page.

Question 5   **K4 (3 marks)**

Help VisualWave identify the image effect being applied to the images shown below. The original image is on the left and the modified version of the right. Choose from one of the following filters: *grain, brightness, contrast*.

Original Image	Modified Image	Name of effect being applied

Question 6   **C2 (6 marks)**

VisualWave need to create composite and layered images.

a. Provide descriptions for the following blending options associated with the creation of composite images.

    i.   How does hard light affect an image?

      _____

      _____

      _____

_____

    ii.   How does overlay affect an image?

_____

_____

_____

   iii.   How does multiply affect an image?

_____

_____

_____

b. Provide descriptions for the following layer effects associated with the creation of composite images.

    i.   How does a drop shadow affect an image?

_____

_____

_____

    ii.   How does an inner glow affect an image?

_____

_____

_____

   iii.   How does emboss affect an image?

_____

_____

_____

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Question 7   **K5 (8 marks)**

Audio is an area where VisualWave still need to acquire the expertise. They have asked for your assistance in order to provide basic information about audio file types.

Fill in the following table with information in order to provide descriptions to VisualWave with regards to different audio file types and their qualities:

Audio File Type	Quality (High/Medium/Low)	Lossy / Lossless
MP3		
WAV		
AAC		
FLAC		

Question 8   **K7 (2 marks)**

Provide definitions for the following audio related terminologies.

a. Tempo

_____

_____

_____

b. Bass

_____

_____

_____

c. Pitch

_____

_____

_____

d. Cross fade

_____

_____

_____

Question 9   **K8 (3 marks)**

Video is another important aspect of VisualWave's operation. Provide definitions to VisualWave for the following video related terminologies.

a. 4K

_____

_____

_____

b. Transitions

_____

_____

_____

c. Aspect ratio

_____

_____

_____

Please turn the page.

Question 10   **A2 (15 marks)**

Now that VisualWave have received the required information regarding audio and video file types, they have been asked to produce an audio/visual production in order to promote your school on YouTube.

a. List the **three** phases involved in the production of audio/visual material.

Phase 1: _____

Phase 2: _____

Phase 3: _____

b. What **eight** considerations should be taken during the first phase.

Consideration 1: _____

Consideration 2: _____

Consideration 3: _____

Consideration 4: _____

Consideration 5: _____

Consideration 6: _____

Consideration 7: _____

Consideration 8: _____

c. For the final output to be delivered, mention **four** criteria you would deem to be very important.

Criteria 1: _____

Criteria 2: _____

Criteria 3: _____

Criteria 4: _____

Question 11   **K9 (2 marks)**

In order to promote their work, VisualWave will be producing a new version of their current website.

Identify **four** basic features of websites.

Feature 1: _____

Feature 2: _____

Feature 3: _____

Feature 4: _____

Question 12   **K10 (4 marks)**

a. After reviewing VisualWave's current website, you have noticed that no CSS is being used. List **two** advantages associated with the use of CSS.

   Advantage 1: _____

   _____

   Advantage 2: _____

   _____

b. Provide to VisualWave the main difference between internal and external CSS.

   _____

   _____

   _____

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Question 13   **C4 (7 marks)**

VisualWave would eventually like to be able to manage themselves the content on their website, in order to keep it updated with their latest news and happenings.

a. Would you recommend an LMS or a CMS for their needs? Give **one** reason for your answer.

    _____

    _____

    _____

b. Explain to VisualWave's management the difference between a dynamic and a static website.

    _____

    _____

    _____

c. Give **three** examples on how interactive features can be included in a dynamic website.

    Example 1: _____

    Example 2: _____

    Example 3: _____

Question 14   **C5 (12 marks)**

VisualWave's current website contains a number of HTML tags. Given the following code snippets, provide explanations of the HTML tags used by: (i) identifying the tag being used, (ii) describing the output of the tag, (iii) identifying any attributes being used and (iv) the use of attributes if any.

Code Snippet:	<title>Welcome to my Website</title>
HTML Tag:	
Output of HTML tag	
Attribute (if any):	
Use of attribute (if any):	
Code Snippet:	This is the main page
HTML Tag:	
Output of HTML tag	
Attribute (if any):	
Use of attribute (if any):	

Code Snippet:	<img src="smiley.gif" >
HTML Tag:	
Output of HTML tag	
Attribute (if any):	
Use of attribute (if any):	

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Question 15   **A3 (15 marks)**

VisualWave would like to update their current website. Write HTML code to produce the same output as can be seen in the screenshot provided by VisualWave below. The title of the page should show "Welcome to VisualWave".

VisualWave Malta

Welcome to our page. Feel free to browse the links

We produce:

1. Audio material
2. Video material

Our opening hours are as follows:

	Morning	Afternoon
Monday	9:00 to 12:00	16:00 to 19:00
Tuesday	9:00 to 12:00	16:00 to 19:00
Wednesday	9:00 to 12:00	Closed
Thursday	9:00 to 12:00	14:00 to 18:00
Friday	9:00 to 12:00	16:00 to 19:00

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