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

SECONDARY EDUCATION CERTIFICATE LEVEL

SEPTEMBER 2017

SUBJECT:	**Information Technology**
PAPER NUMBER:	Synoptic – Unit 2
DATE:	2nd November 2017
TIME:	10:00 a.m. to 12:05 p.m.

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

Scenario

Matthew and Judith want to open a marketing company producing adverts for local products. They asked for your assistance.

Question 1   **K1 (6 marks)**

The first task is to help them understand different multimedia communication systems.
Describe the following multimedia systems.

a. Virtual Reality

_____

_____ (2)

b. Information Kiosks

_____

_____ (2)

c. Social Media

_____

_____ (2)

Question 2   **K2 (8 marks)**

Matthew has heard of different file formats in computer systems. He is interested in learning more about them.
List **TWO** different file formats for each of the following multimedia components:

a. Image

_____

_____ (2)

b. Video

_____

_____ (2)

c. Audio

_____

_____ (2)

d. Text

_____

_____ (2)

Please turn the page.

Question 3   **K3 (7 marks)**

Judith wants to learn more about images and graphic manipulation. The first step is to help her understand the different file types for audio and visual purposes.

a. Match the description with one the following terms.

jpg, pdf, mov, ogg, bmp, txt, gif

	Description	File Extension
i.	Is usually used to store compressed moving images	
ii.	Is a format used for compressed images in photograph	
iii.	Is frequently used to transfer a file without loss of formatting	
iv.	Is a format without compression used for pictures	

(4)

b. Should this picture be saved as raster or vector?

Reference: https://commons.wikimedia.org/

_____ (1)

c. Mention **ONE** difference between lossy and lossless compression.

_____

_____ (2)

Question 4   **K4 (6 marks)**

The next step is to help Judith understand graphic manipulation and editing.

Identify the effect being applied to the picture by choosing **ONE** of the following terms.

decreased brightness, increased brightness, blur, sharpen, increased contrast, solidify

	Original Image	**Modified Image**	**Effect Applied**
a.			(2)
b.			(2)
c.			(2)

Reference: https://commons.wikimedia.org/

Please turn the page.

Question 5   **C2 (7 marks)**

Judith wants to learn more advanced techniques in image manipulation.

Consider the following two images:

Reference: https://commons.wikimedia.org/

Reference: https://upload.wikimedia.org/wikipedia/
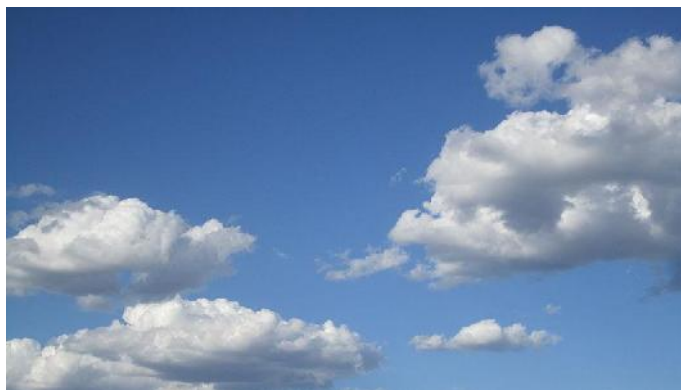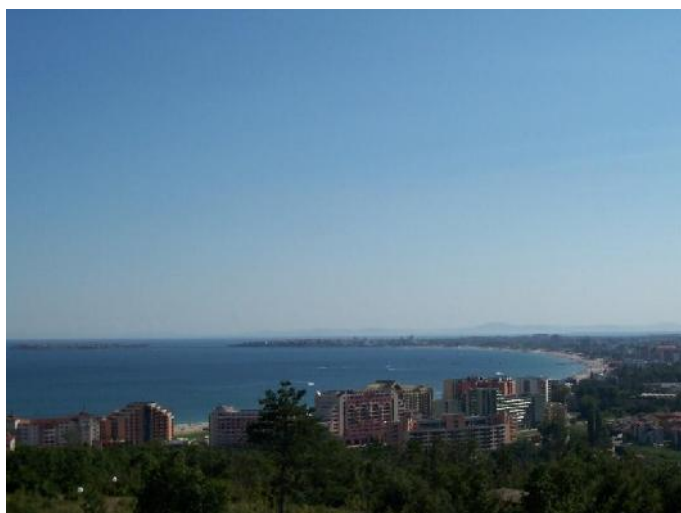
a. Describe how overlay can be used in this case.

_____

_____

_____   (3)

b. Describe the following layers:

drop shadow:

_____

_____

_____ (2)

hard light:

_____

_____

_____ (2)

Question 6   **K5 (6 marks)**

Matthew is interested in learning about computer music files.

a. Write down the quality either low, medium, high or varies and whether the compression is lossy or lossless next to each file format.

File Format	Quality Low/Medium/High/Varies	Compression Lossy/Lossless
mp3		
flac		
wav		

Please turn the page.

Question 7   **K7 (4 marks)**

Matthew wants to understand better computer audio.

Define the following audio terms.

a. Compression

_____

_____

_____ (1)

b. Splitting

_____

_____

_____ (1)

c. Loop

_____

_____

_____ (1)

d. Tempo

_____

_____

_____ (1)

Question 8 **C3 (6 marks)**

Choose an appropriate format for each of the following scenarios. Give **ONE** reason for each choice.

a. Matthew wants to store several audio files that are quickly shared over the Internet.

_____

_____

_____ (2)

b. Judith wants to record his own music, but he wants to keep the quality as close to real as possible.

_____

_____

_____ (2)

c. Matthew will also record some videos with his web-cam and he wants the files to be easily editable with Windows Movie Maker.

_____

_____

_____ (2)

Please turn the page.

Question 9   **A2 (10 marks)**

Matthew and Judith want to design an advert to raise awareness about their project. The advert will be a 30 second clip with narration. You will help them produce it.

a. Explain **THREE** things that need to happen during planning.

_____

_____

_____

_____

_____

_____

_____ (6)

b. Explain **TWO** video effects that can be applied.

   Effect 1:

_____

_____

_____ (1)

   Effect 2:

_____

_____

_____ (1)

c. How will frame rate affect the final advert?

_____

_____

_____

_____ (2)

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Question 10   **K10 (3 marks)**

As a final task, Judith and Matthew want to design a simple website before having a professional one. You must explain some basic web design concepts.

List **THREE** advantages of using CSS.

Advantage 1:

_____

_____ (1)

Advantage 2:

_____

_____ (1)

Advantage 3:

_____

_____ (1)

Question 11   **C4 (8 marks)**

Matthew has heard that a possible solution for their website is to use a content management system (CMS).

a. Explain what a CMS is.

_____

_____

_____

_____ (3)

Please turn the page.

b. Explain the difference between a static and a dynamic website.

(3)

c. Give **ONE** example of interactivity when using a website.

(2)

Question 12   **C5 (9 marks)**

For each of the following HTML tags, explain the purpose of the tag, what is its attribute (if any), and what the attribute does (its purpose).

HTML Code	Introduction
Purpose of Tag	
Attributes (if any)	
Purpose of Attributes (if any)	

(3)

HTML Code	<img src="picnic.gif" alt="Picnic">
Purpose	
Attributes (if any)	
Purpose of Attributes (if any)	

(3)

HTML Code	This webpage is still under construction
Purpose	
Attributes (if any)	
Purpose of Attributes (if any)	

(3)

Please turn the page.

Question 13   **A3 (20 marks)**

Matthew and Judith want to create a basic web-page. Provide the code that creates the following web-page.

Firefly Main Page

Welcome to our page. The following table shows our plan.

Date	Milestone
Feb 2017	Website
Dec 2017	Offices
Mar 2018	Fully functional

People responsible are:

- Matthew Pavia
- Judith Zahra

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