

MATRICULATION AND SECONDARY EDUCATION CERTIFICATE
EXAMINATIONS BOARD**SECONDARY EDUCATION CERTIFICATE LEVEL
2025 SUPPLEMENTARY SESSION**

SUBJECT:	Information Technology
PAPER NUMBER:	Synoptic – Unit 2
DATE:	3 rd November 2025
TIME:	8:30 a.m. to 10:35 a.m.

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

For examiners' use only:

Question	1	2	3	4	5	6	7	8	Total
Score									
Maximum	6	12	8	8	8	12	8	8	70

Answer **ALL** questions in the space provided.

Scenario

- 'EcoExplore' is an initiative led by Ryan Green.
- It aims at educating the community about natural parks and their ecosystems.
- To reach a wider audience, the initiative is expanding its presence across several different platforms.

Question 1

K-1 (6 marks)

Ryan can use different types of media to educate the community.

- a. List **TWO** different types of media, apart from images, audio and video.

Media 1: _____ (1)

Media 2: _____ (1)

- b. Relate each type of media you listed in Question 1a with **ONE** of the human senses.

Human sense related to Media 1: _____ (1)

Human sense related to Media 2: _____ (1)

- c. Identify **ONE** hardware device required when developing or using each media type you listed in Question 1a. A different hardware device should be identified for each media type.

Hardware required for Media 1: _____ (1)

Hardware required for Media 2: _____ (1)

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Question 2

C-1 (12 marks)

- Ryan wants to create an engaging platform for 'EcoExplore' to reach the community.
- The aim of this platform is to promote nature walks and encourage wildlife spotting events, where people can find animals and birds.
- Ryan also wants to inspire activities like planting trees and cleaning up parks.
- He intends to choose a multimedia system that reaches many people while not being very expensive.

- a. Select the most appropriate multimedia system for 'EcoExplore' from the following two options:

Social Media	Virtual Reality
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Most appropriate multimedia system: _____ (4)

b. Justify the multimedia system you selected in Question 2a based on audience and costs.

Justification based on audience:

 (2)

Justification based on costs:

(2)

c. Ryan wants to modify the selected multimedia system to be aware of how many people are planning to attend.

Suggest how the multimedia system you selected in Question 2a can be modified to cater for Ryan's new requirements based on audience.

[illegible]

Please turn the page.

Question 3**K-2 (8 marks)**

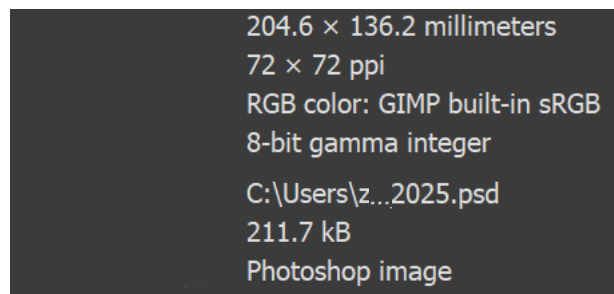
Ryan is currently working on the poster for an upcoming nature walk.

- a. State **TWO** main characteristics of image formats, apart from resolution and vector/raster.

Characteristic 1: _____ (1)

Characteristic 2: _____ (1)

- b. The screenshot below shows the properties of the PSD file containing Ryan's poster.



From this screenshot, identify the following image characteristics:

i. The value of the image resolution: _____ (1)

ii. Whether the image is vector or raster: _____ (1)

- c. Describe the following characteristics of PSD images:

i. Resolution: _____

_____ (2)

ii. Vector/Raster: _____

_____ (2)


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Question 4**K-3 (8 marks)**

- Ryan will be including the image shown below in the poster promoting the nature walk event.
- He is trying out different image effects to determine which one is the most attractive.

a. Match the image effects listed in the box below with the image representing the effect.

Brightness	Sketch
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Original image
 <p>(Source: https://pixabay.com)</p>

 <p>Effect 1: _____ (1)</p>	 <p>Effect 2: _____ (1)</p>
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This question continues on next page.

b. Describe the following image effects.

i. Transparency (opacity): _____

_____ (1)

ii. Saturation: _____

_____ (1)

c. Describe the output obtained when applying minimum and maximum intensities to the contrast image effect.

Contrast minimum intensity: _____

_____ (2)

Contrast maximum intensity: _____

_____ (2)

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Question 5

K-5 (8 marks)

Ryan is now planning to create engaging video clips to emphasize the importance of conservation.

a. Name **FOUR** video file characteristics, apart from frame rate and duration.

Characteristic 1: _____ (0.5)

Characteristic 2: _____ (0.5)

Characteristic 3: _____ (0.5)

Characteristic 4: _____ (0.5)

b. The screenshot below shows the properties of a WebM video file.

Property	Value
Video	
	00:00:32
	640 x 360
	533kbps
	25.00 frames/second
	VP8
	No
	Sorenson Squeeze
	5/20/2010 4:21 PM

(Adapted from: <https://www.ubackup.com/data-recovery-disk/recover-deleted-webm-files-1220-rc.html>)

From this screenshot, identify the frame rate and the duration of this WebM video file.

Frame rate: _____ (1)

Duration: _____ (1)

c. Describe the following video file characteristics:

i. Frame rate: _____

_____ (2)

ii. Duration: _____

_____ (2)

Please turn the page.

Question 6**C-3 (12 marks)**

- To reach a wider audience, Ryan is thinking of broadcasting audio-visual content on television.
- The content will feature shots of local nature trails and wildlife, accompanied by a person's voice and background music.
- Ryan is not sure about the best audio and video files to use for broadcasting on television.

- a. Explain **ONE** limitation of using .aac audio files and **ONE** limitation of using .ogg video files for television broadcasting.

Explanation of .aac limitation: _____

_____ (2)

Explanation of .ogg limitation: _____

_____ (2)

- b. Justify why .lpcm audio files and .mpeg4 video files would be more appropriate than .acc and .ogg files, for broadcasting content on television.

Justification of .lpcm audio file: _____

_____ (2)

Justification of .mpeg4 video file: _____

_____ (2)

- c. Justify, with respect to file size and compatibility, why .mov (Quicktime) video containers are more appropriate than .flv containers for broadcasting Ryan's audio-visual content on television.

Justification based on file size: _____

_____ (2)

Justification based on compatibility: _____

_____ (2)

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Question 7

K-7 (8 marks)

- In addition to the multimedia system and audio-visual content on television, Ryan decided to create a website.
- This will help him expand the reach of 'EcoExplore' and provide detailed information about its events.

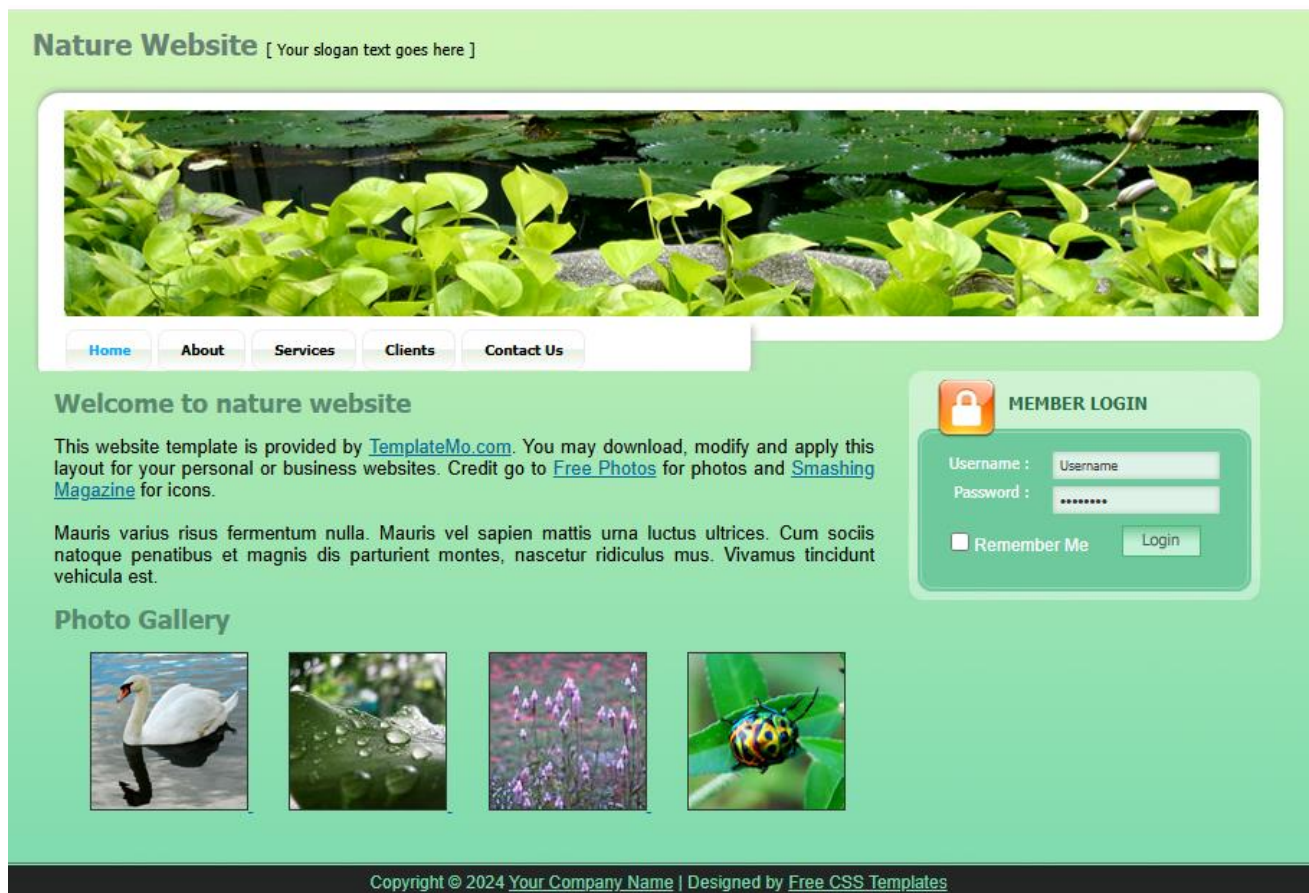
- a. List **TWO** basic elements of a website, apart from navigation menu and footer.

Element 1: _____ (1)

Element 2: _____ (1)

This question continues on next page.

- b. Identify (i) the navigation menu and (ii) the footer in the below website image. Draw a circle and label it by writing its name next to the circle. (2)



(Adapted from: <https://templatemo.com/tm-093-nature>)

- c. Outline the purpose of the following basic website elements:

i. Navigation menu: _____

 _____ (2)

ii. Footer: _____

 _____ (2)

Question 8**K-9 (8 marks)**

Ryan will be using HTML to develop the website for 'EcoExplore'.

a. Define HTML and its use.

 (2)

b. HTML tags are used to develop websites.

i. List **ONE** example of an HTML basic tag, apart from <html>, <a> and <link>.

HTML basic tag: _____ (0.5)

ii. List **ONE** example of an HTML element tag, apart from and <hr>.

HTML element tag: _____ (0.5)

iii. List **TWO** examples of HTML 5 tags, apart from <footer> and <nav>.

HTML 5 tag 1: _____ (0.5)

HTML 5 tag 2: _____ (0.5)

c. Relate the following **FOUR** attributes to the statement which defines their use in relation to HTML tags.

alt	source (src)	id	rel
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i. This attribute is used with the tag to specify the path to where the image is stored. _____ (1)

ii. This attribute is used with the <link> tag to specify the relationship between the current document and the linked source. _____ (1)

iii. This attribute uniquely identifies an HTML element. _____ (1)

iv. This attribute is used with the tag to describe the content of the image in case the image fails to display. _____ (1)

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