



**L-Università  
ta' Malta**

MATRICULATION AND SECONDARY EDUCATION CERTIFICATE  
EXAMINATIONS BOARD

**SECONDARY EDUCATION CERTIFICATE LEVEL  
2025 MAIN SESSION**

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SUBJECT:	<b>Information Technology</b>
PAPER NUMBER:	Controlled – Unit 2
DATE:	15 <sup>th</sup> May 2024
TIME:	10:00 a.m. to 11:35 a.m.

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

**Name of candidate** \_\_\_\_\_

**I.D. number** \_\_\_\_\_

**School** \_\_\_\_\_

**Class** \_\_\_\_\_

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

**Scenario**

- Gianni is a big fan of comic books.
- He would like to organise a comic book fair.
- He is thinking of using different types of media to promote this event.

**Question 1**

**K-1 (4 marks)**

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

Media 1: \_\_\_\_\_ (0.5)

Media 2: \_\_\_\_\_ (0.5)

b) Relate the following media with **ONE** of the human senses.

Audio: \_\_\_\_\_ (0.5)

Video: \_\_\_\_\_ (0.5)

c) Identify **TWO** hardware devices that are required to develop or experience each of the following media, apart from keyboard and mouse.

Hardware 1 required for Audio: \_\_\_\_\_ (0.5)

Hardware 2 required for Audio: \_\_\_\_\_ (0.5)

Hardware 1 required for Video: \_\_\_\_\_ (0.5)

Hardware 2 required for Video: \_\_\_\_\_ (0.5)

**Question 2**

**K-2 (4 marks)**

- Gianni is currently designing the logo for the comic book fair.
- This logo will be incorporated in various media promoting the fair.

a) State **FOUR** main characteristics of image formats, apart from 'image size' and 'vector/raster'.

Characteristic 1: \_\_\_\_\_ (0.25)

Characteristic 2: \_\_\_\_\_ (0.25)

Characteristic 3: \_\_\_\_\_ (0.25)

Characteristic 4: \_\_\_\_\_ (0.25)

b) The following screenshot shows some properties of the image file *comic logo.png*.



From the above screenshot, identify the following image characteristics.

- i. The image size: \_\_\_\_\_ (0.5)
- ii. Whether the image is vector/raster: \_\_\_\_\_ (0.5)

c) Describe 'image size' and 'vector/raster' as characteristics of PNG images.

Image size: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (1)

Vector/raster: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (1)

**Please turn the page.**

**Question 3**

**K-4 (4 marks)**

Apart from the logo, Gianni thought of having soundtrack for the event.

a) Name **TWO** audio file characteristics.

Characteristic 1: \_\_\_\_\_ (0.5)

Characteristic 2: \_\_\_\_\_ (0.5)

b) Relate the following **FOUR** audio file types to the statement which appropriately states their characteristics.

AAC	FLAC	MP3	WAV
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i. This is an uncompressed audio file type. \_\_\_\_\_ (0.25)

ii. A lossy audio file type capable of producing high-quality audio with less data compared to other lossy audio files. \_\_\_\_\_ (0.25)

iii. A common lossy audio file type which can produce medium to high quality audio. \_\_\_\_\_ (0.25)

iv. A compressed but lossless audio file type. \_\_\_\_\_ (0.25)

c) Describe the **TWO** audio file characteristics named in Question 3a.

Characteristic 1: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_ (1)

Characteristic 2: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_ (1)

**Question 4**

**K-5 (4 marks)**

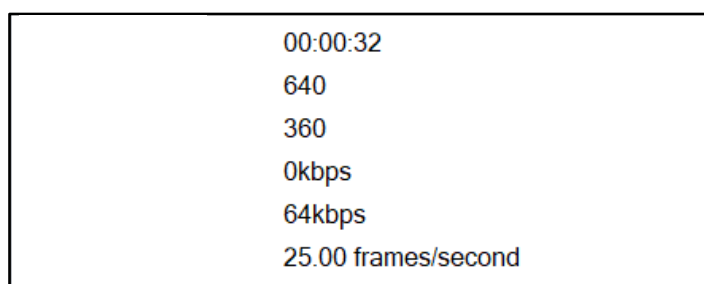
- Gianni thought of promoting the fair through a video advert.
- He asked his friends to share any videos related to comics.
- When he checked the video files, Gianni noticed that these have different characteristics.

a) Name **TWO** different video file characteristics, apart from 'frame rate' and 'duration'.

Characteristic 1: \_\_\_\_\_ (0.5)

Characteristic 2: \_\_\_\_\_ (0.5)

b) The following screenshot shows some properties of a .webM video file.



From the screenshot above, identify the value of the frame rate and the duration, of the video file.

i. Frame rate: \_\_\_\_\_ (0.5)

ii. Duration: \_\_\_\_\_ (0.5)

c) Describe the following **TWO** video characteristics:

Frame rate: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (1)

Duration: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (1)

***Please turn the page.***

**Question 5**

**C-3 (6 marks)**

- To promote the comic book fair, Gianni will broadcast the video advert on television.
  - He is currently thinking about what audio and video file formats he should use.
- a) Explain **ONE** limitation of .mp3 audio files and **ONE** limitation of .webM video files with respect to using such file types in the video advert which will be shown on television.

Explanation of .mp3 limitation:

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(1)

Explanation of .webM limitation:

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(1)

- b) Justify why .wav audio files and .mkv video files would be more appropriate for the purpose of showing the video advert on television.

Justification of .wav audio file:

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(1)



**Question 6****K-7 (4 marks)**

- Gianni is considering developing a website where online comics can be accessed and enjoyed.
- This website will also serve as a platform to provide information about the fair.

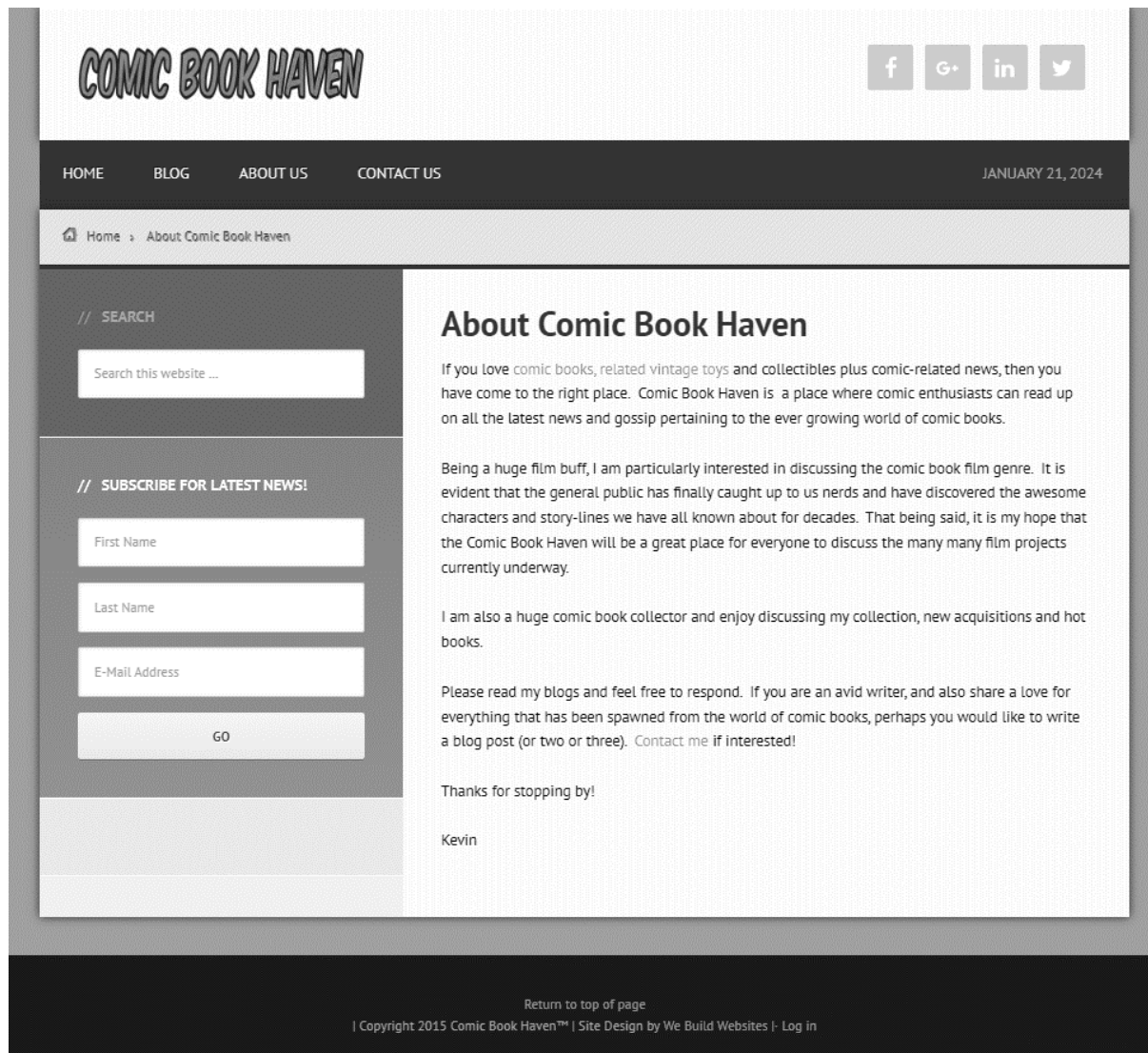
a) List **TWO** basic elements of a website apart from 'navigation menu' and 'footer'.

Element 1: \_\_\_\_\_ (0.5)

Element 2: \_\_\_\_\_ (0.5)

b) The image below shows a possible design for the website.

Identify the **TWO** basic website elements you listed in Question 6a by drawing a box around these elements in the image below. Each website element should be labelled by writing its name next to it. (1)



(Adapted from: <http://comicbookhaven.com>)

c) Outline the purpose of each of the **TWO** basic website elements you listed in Question 6a.

Purpose of element 1: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_ (1)

Purpose of element 2: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_ (1)

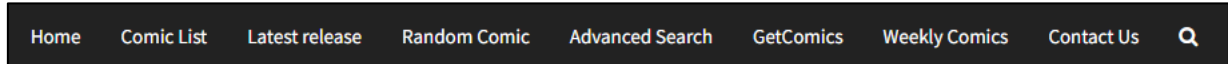
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**Question 7**

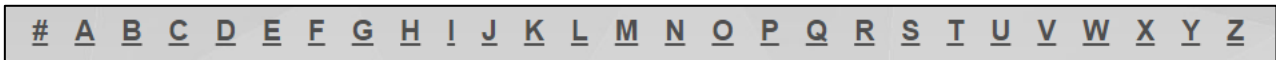
**C-4 (6 marks)**

- The main aim of the website Gianni is designing is to inspire people to read comic books.
- The website will contain free online books for everyone, from children to adults.
- For this reason, the website needs to be user-friendly.
- It should also include features which allow users to contact Gianni, the website developer, through different channels.

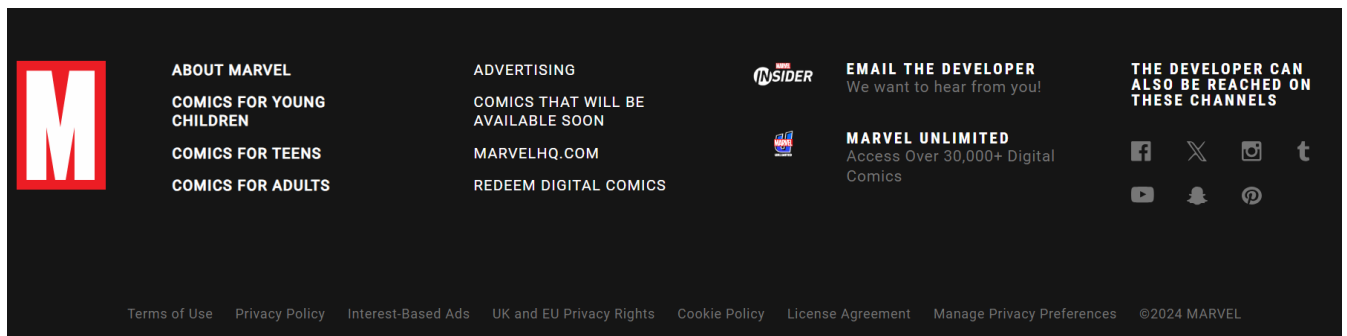
The following are two possible designs for the navigation menu and the footer.



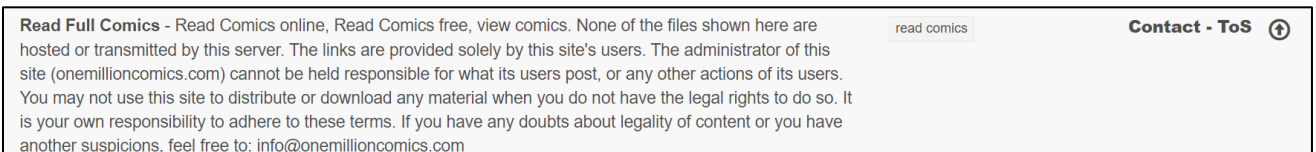
Navigation Menu 1  
(Source: <https://readcomicsonline.ru/>)



Navigation Menu 2  
(Source: <https://view-comic.com/>)



Footer 1  
(Adapted from: <https://www.marvel.com/>)



Footer 2  
(Source: <https://view-comic.com/>)

a) Select the most appropriate navigation menu and footer for this website.

Navigation menu: \_\_\_\_\_ (1)

Footer: \_\_\_\_\_ (1)

b) Justify the choice of the navigation menu and footer you selected in Question 7a.

Justification of Navigation Menu: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (1)

Justification of Footer: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (1)

c) While the website will provide free online comic books, Gianni intends to have a restricted section accessible only to members.

Argue whether Gianni's website should be static or dynamic given these requirements.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (2)

***Please turn the page.***

**Question 8**

**K-9 (4 marks)**

- Having designed the website, it is time for Gianni to start coding it.
- He will be using HTML to develop the website.

a) Define HTML and its use.

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(1)

b) Tags are used when developing websites using HTML.

i. List **ONE** example of the following tags.

HTML basic tag: \_\_\_\_\_ (0.25)

HTML 5 tag: \_\_\_\_\_ (0.25)

ii. List **TWO** examples of HTML element tags, apart from <img>.

HTML element tag 1: \_\_\_\_\_ (0.25)

HTML element tag 2: \_\_\_\_\_ (0.25)

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

alt	id	rel	source (src)
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i. This attribute is used to specify the relationship between an HTML document and a CSS document. \_\_\_\_\_ (0.5)

ii. This attribute is used to uniquely identify an HTML element. \_\_\_\_\_ (0.5)

iii. This attribute specifies the path to an image. \_\_\_\_\_ (0.5)

iv. This attribute provides alternative information for an image in case the image does not load on the webpage. \_\_\_\_\_ (0.5)

**Question 9**

**K-10 (4 marks)**

Gianni will also be using CSS to enhance the look of the website.

a) Define CSS and its use.

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(1)

b) Distinguish between internal and external CSS.

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(1)

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c) The following lines of code are to be included in the CSS of the website.

```
.p1 {  
  background: green;  
  border: 3px solid blue;  
  color: white;  
  font-family: Arial;  
  margin: 120px;  
}
```

Outline the specific use of the following CSS selector and declarations as utilised in the code above.

i. dot (.) (class selector): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (0.5)

ii. background (declaration): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (0.5)

iii. font-family (declaration): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (0.5)

iv. margin (declaration): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ (0.5)

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