

**BASIC EDUCATION CERTIFICATE EXAMINATION**  
**FOR SCHOOL CANDIDATES, 2024**

**COMPUTING 2**

**FINAL MARKING SCHEME**

**STRICT INSTRUCTIONS FOR COMPLIANCE**

Candidates are expected to answer **only four** questions in all, including **question 1**. Any candidate, who contravenes this instruction would have only the **first four** answers marked leaving those in excess unmarked

**QUESTION 1**

(a) User IV

**[2 marks]**

(b) Measures to adapt by the users to avoid workstation risks include:

- (i) Evaluating the display screen
- (ii) Adjusting the chair to the standard position
- (iii) Use of screen shield
- (iv) Repositioning of devices
- (v) Taking intermittent breaks
- (vi) Blinking the eye/taking the eye from the screen intermittently
- (vii) Use of anti-lens glasses
- (viii) Use of ergonomic Keyboard

**[Any 2 points x 2 marks each = 2 x 2 = 4 marks]**

(c) Steps to be taken by the users to set the entire ten-page document to 2.0 line spacing are:

- (i) Select the entire ten-page document
- (ii) Click on the Home Tab
- (iii) Under the paragraph option, click on the Line and Paragraph spacing
- (iv) Click on the number 2.0 to set the line spacing to the selected number.

**OR**

Steps to be taken by the users to set the entire ten-page document to 2.0 line spacing are:

- (i) Press CTRL + A to select the entire document
- (ii) On the home tab, select line spacing
- (iii) Click/Select 2.0

**OR**

Steps to be taken by the users to set the entire ten-page document to 2.0 line spacing are:

- (i) Press CTRL + A to select the entire document
- (ii) Press CTRL + 2 to set the line spacing 2.0.

**OR**

Steps to be taken by the users to set the entire ten-page document to 2.0 line spacing are:

- (i) From the home tab/click on the home tab
- (ii) Under the paragraph option, click line and paragraph spacing
- (iii) Click 2.0 to set the line spacing
- (iv) Type your document.

**OR**

Steps to be taken by the users to set the entire ten-page document to 2.0 line spacing are:

- (i) Select the entire document
- (ii) Click PAGE LAYOUT tab on the ribbon
- (iii) Click on the drop down arrow located on the lower right corner of the paragraph tool to display the paragraph dialog box.
- (iv) At the line spacing section/select double line spacing OR enter 2.0 at the AT: section
- (v) Click OK.

**[1 mark for each step = 1 x 4 = 4 marks]**

(d) The most appropriate Microsoft Excel chart types to show the relationship between the number of pages each user typed and the time spent typing is:

- (i) Column chart/clustered column chart
- (ii) Bar chart/clustered bar chart
- (iii) Line chart

**[1 mark each = 1 x 2 = 2 marks]**

(e) Benefits the users will derive when their computers are networked include:

- (i) It will reduce the cost of shared resources
- (ii) It will enable the users to access resources and data from remote locations
- (iii) It will promote communication and collaboration between multiple users, devices and locations
- (iv) It will allow multiple users to share resources such as printers, scanners, and storage devices
- (v) It will provide centralised management of data through a single point of control for backup, storage and security

- (vi) It will allow for expansion to easily and quickly meet changing business needs and accommodate the growing number of users and devices, etc.

**[Any 2 points x 2 marks each = 2 x 2 = 4 marks]**

- (f) Network topologies that could be used to network the computers for the users include:

- (i) Bus topology
- (ii) Star topology
- (iii) Ring topology
- (iv) Mesh topology
- (v) Hybrid.

**[Any 2 x 1 mark each = 2 x 1 = 2 marks]**

- (g) The algorithm to demonstrate the activity is:

```
School routine activities
IF time is 7:30 a.m.
    Morning assembly
END
IF time is 7:40 a.m.
    Classes hours
END
IF time is 9:40 a.m.
    Morning break
END
IF time is 10:00 a.m.
    Classes hours
END
IF time is 12:30 p.m.
    Afternoon break
END
IF time is 1:00 p.m.
    Classes hours
END
IF time is 2:30 p.m.
    Closing
```

**[1 mark for each END = 1 x 6 = 6 marks]**

**ALTERNATE ANSWER**

START

If time is 7:30 am

Then morning assembly

If time is 7:40am,

Then classes hours

If time is 9:40am,

Then morning break

If time is 10:00am,

Then resume classes hours

If time is 12:30pm,

Then afternoon break

If time is 1:00pm,

Then classes hours

If time is 2:30pm,

Closing

Stop

*[1 mark for each Then = 1 x 6 = 6 marks]*

**QUESTION 2**

(a) Processor

The processor or the brain of the computer is an integrated electronic circuit that performs calculations and executes instructions in a computer. It handles arithmetic, logic, input/output, and other basic operations.

*[NB: Examiners to consider (nature, components and function) in candidate's description before scoring]*

**[3 marks]**

(b) The image shown in Figure 2 is a QR code or a Quick Response code

**[2 marks]**

(c) The image shown in Figure 2 is accessed for information through the following:

(i) For a Smartphone with a QR App installed, tap the App icon to open. Point the phone's camera at the image. The App then picks the information on the image and displays it on the phone's screen or as a link for the user to access.

**OR**

(ii) For a Smartphone without a QR code App installed, tap to open Google on the phone or from any browser on the phone. Locate and tap the Google lens at the far right end of the search box. After the lens opens, point the phone's camera at the image. The lens then picks the information on the image and displays it on the phone's screen or as a link for the user to access.

**OR**

(iii) Using a QR code reader/scanner, connect the reader/scanner to a computer. Open the App on the computer and then point the scanning lens of the device to the image. The device then picks the information and displays it on the computer screen or as a link for the user to access.

**[4 marks]**

(d) File extensions come in various categories as

Category	Extension
Text/Word	.doc/.docx, .odt, .pages, .rft, .txt, .wpd, .wps
Spreadsheet files	.csv, .numbers, .ods, .xls, .xlsx
Web-related files	.asp, .aspx, .css, .htm, .html, .jsp, .php, .xml.
Image files	.bmp, .gif, .ico, .jpeg, .jpg, .png, .raw, .tif, .tiff.
Audio and video files	.aif, .mov, .mp3, .mp4, .mpg, .wav, .wma, .wmv.
Draw program files	.afdesign, .ai, .cad, .cdr, .drw, .dwg, .eps, .odg, .svg, .vsdx
Page layout files	.afpub, .indd, .pdf, .pdfxml, .pmd, .pub, .qxp.
Programming files	.c, .cpp, .cs, .java, .js, .json, .py, .sql, .swift, .vb.
Compression and archive files	.7z, .rar, .tar, .tar, .gz, .zip.
System files	.bak, .cfg, .conf, .ini, .msi, .sys, .tmp.
Executable program files	.app, .bat, .bin, .cmd, .com, .exe, .vbs, .x86.

*[NB: all the extensions should be doted]*

***[Any 3 x 1 mark each = 3 x 1 = 3 marks]***

**QUESTION 3**

(a)

(i) Columns and Rows needed are:

Columns = 3

Rows = 7

**Alternatively,**

Columns = 6

Rows = 4

**[2 marks]**

(ii) Steps to be followed to create the table using Microsoft Word include:

1. Click on the Insert Tab
2. Click on the Table button/option
3. Select 3 columns and 7 rows
4. Click on the selected number of columns and rows to create the table.

**OR**

1. Click on the Insert Tab
2. Click on the Table button/option
3. Click on Draw Table
4. Drag the draw pencil, to draw number 3 columns and 7 rows.
5. Click on ok.

**Alternatively,**

1. Click on the Insert Tab
2. Click on the Table button/option
3. Select 4 rows and 6 columns
4. Click on the selected number of columns and rows to create the table.

**OR**

1. Click on the Insert Tab
2. Click on the Table
3. Click on insert Table
4. From the insert Table dialogue box enter 6 columns and 4 rows.
5. Click ok.

**[1 mark for each correct step. 1 x 4 steps = 1 x 4 = 4 marks]**

- (b) The larger file is possible if the presentation includes too many:
- (i) Audios
  - (ii) Pictures
  - (iii) Videos
  - (iv) Other graphics etc.

[Any 1 x 2 marks = 1 x 2 = 2 marks]

- (c) Features of Microsoft Publisher include:

- (i) Variety of templates to choose from / *Design Template*
- (ii) Insert images, photographs, texts or charts and graphs
- (iii) Format the page colours, font styles and backgrounds
- (iv) Use columns in news publications
- (v) Use master pages to apply settings to all pages
- (vi) Edit existing images and photographs
- (vii) Create original graphics
- (viii) Collaborate and share publications etc.

[Any 1 x 2 marks = 1 x 2 = 2 marks]

- (d) The Microsoft Excel function to determine the lowest termly score for Kofi Malik will be:

$\text{=MIN}(B2:D2)$  OR  $\text{=MIN}(B2, C2, D2)$

[2 marks]



### QUESTION 4 *Computer Network Features of Ring Topology*

(a) ~~Design features used to design a blog:~~

- (i) It uses repeaters to boost the signal strength
- (ii) Data transmission is unidirectional and sequential, bit-by-bit
- (iii) It improves communication link fidelity
- (iv) It is faster and more reliable than other topologies
- (v) If one link breaks, the network cannot function etc.
- (vi) *It uses token passing*

**[Any 2 x 2 marks each = 2 x 2 = 4 marks]**

(b) **Forward All:**

This e-mail feature allows the sender to send to all the recipients, the original message including any attachments.

**[3 marks]**

(c) (i) Features expected to be seen from a blog include:

- Header or Title.
- Main area with posts.
- Left-hand sidebar with links to older posts, the blogger's profile and social media accounts, and other sites (if applicable).
- Right-hand sidebar for additional information
- Footer with additional links.

*Slider*  
*Logo*  
*Blog Name*

**[Any 2 x 2 marks each = 2 x 2 = 4 marks]**

(iii) Tools for designing a blog include:

- Blogger
- Drupal
- Joomla
- Medium
- Pixpa
- Tumblr
- WordPress
- WiX

**[Any 1 x 1 mark = 1 x 1 = 1 mark]**

**QUESTION 5**

(a) The operator precedence approach to evaluate the expression is:

$$(1+3) * 5 +7$$

$$4 * 5 +7$$

$$20 +7$$

$$27$$

**[1 mark for each correct step = 1 x 3 = 3 marks]**

(b) Decomposition in programming:

Decomposition is described as the process of breaking down complex or huge problems/tasks into smaller problems/tasks that can be solved easily.

**[3 marks]**

(c) Software packages that are used in the construction of robotic artefacts include:

(i) EV3

(ii) Mbot

(iii) Webot

(iv) Snap

(v) Scratch

(vi) Lightbot etc.

**[Any 3 x 1 mark each = 3 x 1 = 3 marks]**

(d) The IF-THEN statement would be:

**IF** you are a Monday born **AND** a female **THEN** you are called Adwoa.

**[1 mark for each conditional word = 3 x 1 mark each = 3 x 1 = 3**

**marks]**

A

7.