

JUNE, 2025
COMPUTING

2&1

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CANDIDATES NAME

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**BASIC EDUCATION CERTIFICATE EXAMINATION
2025 EDITION**

COMPUTING 1 & 2

[60 marks]

*This paper is in two sections: **A** and **B**. Answer Question 1 in Section A and any other **three** questions in Section **B**.*

*Answer all the questions in the spaces provided in this question paper. At the end of the examination, you should submit the **entire** question paper to the invigilator.*

*Any candidate who tears off **any** part of the question paper will be **severely** penalized.*

*Whether you answer all the questions in this paper or not, hand in the **entire** question paper to the invigilator.*

Credit will be given for clarity of expression and orderly presentation of material.

SECTION A

[24 marks]

Answer Question 1.

[Compulsory]

1. As a computing student, you are to program a robot to assist your colleagues to buy stationery from a shop. The sequence of activities undertaken to buy the stationery at the shop is as follows:

Go to the stationery shop;

Select the needed stationery;

Check the price of the selected stationery;

Go to the cash counter;

Pay money to the cashier;

Take the stationery along;

Leave the shop.

- (a) Draw a **flowchart using the sequence** of activities.



[10 marks]

(b) Suggest **three modes of payment** the students could use to pay the cashier.

(i)

(ii)

(iii)

[3 marks]

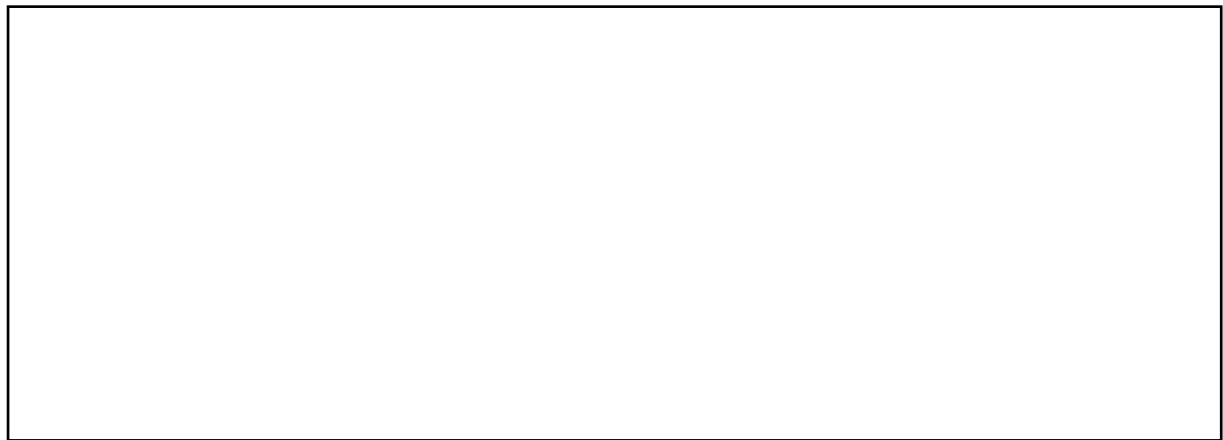
(c) Describe **one** of the **modes of payment** suggested in 1(b).

.....
.....
.....
.....
.....

[3 marks]

(d) Assume that there are four cashiers at the shop, and each of them uses a computer which is not worked for their work. Draw a well labelled diagram to illustrate **two network topologies** that could be used to network the computers.

(i)



[3 marks]

(ii)



[2 marks]

(e) Kofi, a student in your school visited the stationery shop for two days and his expenditure at the shop is as follows:

On Monday, he bought 4 exercise books for Gh¢ 60.00. On Tuesday, he bought 6 pens for Gh¢ 40.00.

(i) **Complete the Microsoft Excel worksheet** using Kofi’s two days expenditure at the stationery shop as shown in Figure 1.

	A	B	C	D
1	Days	Items	Quantity	Amount Gh¢
2	Monday			
3	Tuesday			
4	Total			

Figure 1

[2 marks]

(ii) **Write a formula in Microsoft Excel** to compute Kofi’s total amount spent for the two days at the stationery shop.

.....

[2 marks]

SECTION B

[36 marks]

Answer **three questions only** from this section.

2. (a) Explain the concept of **perceptual computing** to colleagues in the computing club.

.....

[3 marks]

(b) Most companies use **data entry devices** that capture **machine-readable data directly** into the computer system without using the keyboard.

List **three** of such data entry devices.

- (i)
- (ii)
- (iii)

(b) In designing a presentation, shapes allow the user to create complex objects on the slide. List **two categories in which objects found under the shape tool are grouped**.

(i)

.....

.....

(ii)

.....

.....

[2 marks]

(c) A Microsoft Publisher assignment requires that **texts are written over an image on a flyer**.

Outline the steps to accomplish the assignment.

.....

.....

.....

.....

.....

.....

[4 marks]

4. (a) State **one of the data communication models** for networks.

.....

.....

[2 marks]

(b) **Social media sites** were created for friendships, learning, entertainment and other purposes.

List **two** of the sites used for video-sharing.

(i)

.....

(ii)

.....

[2 marks]

(c) Outline **two** of the key principles governing *information security*.

(i)

.....

(ii)

.....

[2 marks]

(d) Describe how the following search techniques are used to *search for information* on the Internet:

(i) AND;

.....

.....

.....

.....

.....

.....

(ii) OR;

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.....

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.....

5. (a) Covert 10010_2 to a **decimal number**.

.....

.....

.....

.....

.....

.....

.....

.....

.....

[4 marks]

(b) In the real-world environment, outline **two** applications of robotics in **each** of the following areas:

(i) Education

(α).....

(β).....

(ii) Transportation

(α).....

(β).....

[2 marks]

(c) A school's robotic club is to construct a robot to be shown during a robotic exhibition organized by the District Education Office.

List **two components of the robot** to be constructed.

(i)

.....

(ii)

.....

[2 marks]

(d) Artificial Intelligence is the ability of a computer or computer-controlled robots to perform tasks like human beings.

List **two abilities that make the computers** or computer-controlled robots intelligent.

(i)

.....

(ii)

.....

[2 marks]

END OF ESSAY TEST

SECTION A
OBJECTIVES

[40 marks]

1. Computers have become smaller, faster, and more reliable due to the use of microprocessor in the

- A. second generation
- B. third generation
- C. fourth generation**
- D. fifth generation

2. The graphic tablet is a kind of device used to capture

- A. RFID signals
- B. QR code scans
- C. magnetic card data

D. handwriting, drawings and inputs

3. To make teaching and learning of computing more interactive, the teacher intends to demonstrate an activity by showing diagrams, images and videos on a large screen in the classroom. The most appropriate device to achieve this objective by the teacher is a

- A. printer
- B. plotter
- C. monitor
- D. projector**

4. The purpose of a storage device in a computer system is for

- A. keeping and retrieving data**
- B. displaying graphic elements
- C. executing computer programs
- D. connecting devices to the Internet

5. A school prefect approached the computing club to guide him in designing a presentation using Microsoft PowerPoint. The prefect intends to practice the presentation and record the time spent for each slide to make his presentation run smoothly. The best feature the computing club will suggest to the prefect is

- A. presenter notes
- B. presenter feature
- C. rehearse feature
- D. rehearse timings**

6. After the computing class, a colleague approached you to further explain to him how to reference a worksheet cell in Microsoft Excel. In the explanation, you mentioned that, to reference a cell, one needs to use the cell

- A. value
- B. address**
- C. content
- D. function

7. Bello formatted a Microsoft Excel worksheet:

Cells with different colours based on specific conditions and it was very beautiful. Which of the given features can a student use to achieve the same results as Bello?

- A. Conditional sorting
- B. Conditional filtering
- C. Conditional validation
- D. Conditional formatting**

8. Which of the following terminologies is associated with computer network?

- A. Junk
- B. Trojan
- C. Firewall**
- D. Defragmenter

9. Zalia is very good at posting her pictures and location of wherever she goes on her social media platforms for her friends to see. The potential risk associated with Zalia's activities online is:

- A. Identity theft**
- B. Learning difficulties
- C. Strengthening friendships
- D. Building a professional network

10. Surfing the Internet requires the use of search engines, which are designed to help users find:

- A. Information on the Internet**
- B. Information from e-mail messages
- C. Information from the computer hard disk drive
- D. Information from files and folders on the computer

11. In the concept of programming, a comment in a program code is used to:

- A. Explain portions of the code
- B. Make the program run faster
- C. Change the output of the program
- D. Temporarily remove a line of code

12. Robotic systems have components that relate to the functioning of human organs. The component of the robot that acts like the human brain is the:

- A. Motors
- B. Sensors
- C. Batteries
- D. Controllers

13. The most powerful technological innovation made during the development of the fifth-generation computers was the use of:

- A. Vacuum tubes
- B. Integrated circuits
- C. VLSI microprocessors
- D. ULSI microprocessors

14. A customer gave a new laptop to a technician to set accounts on Windows that is required to make changes to all system settings. The best account type to advise the technician to consider is:

- A. Guest
- B. Remote
- C. Standard
- D. Administrator

15. JHS students were given a project by their computing teacher to create a virtual museum for the storage of electronic artifacts. The possible tool for this assignment is:

- A. Cloud computing
- B. Social networking
- C. Augmented reality
- D. Artificial intelligence

16. The Secretary to the Parliament of Ghana sits on an ergonomic chair to work in the office because it:

- A. Ensures proper sitting arrangements
- B. Makes the workplace look attractive
- C. Aligns the chairs properly with the workstation
- D. Promotes proper body alignment and support

17. Text formatting options in Word processing applications include:

- A. Subscript
- B. Underline
- C. Superscript
- D. Strikethrough

18. A user intends to create and customize diagrams in Microsoft PowerPoint for a presentation. The best feature to help achieve the task is:

- A. Charts
- B. Shapes
- C. WordArt
- D. SmartArt

19. In a Desktop Publishing project work, a student's work contained more text than it can display. This situation is best described as:

- A. layout
- B. template
- C. overflow
- D. alignment

20. The purpose of the IF function in Microsoft Excel application is to:

- A. calculate the average of a range of cells
- B. manipulate text from multiple cells into one cell
- C. perform a logical test and return a value for a condition
- D. return the value from a specified row and column intersection

21. What value will the Microsoft Excel function =COUNT(A1:A10) return?

- A. 1
- B. 9
- C. 10
- D. 11

22. At the Internet café, Kofi connected his laptop to the Internet without using a cable, and Akua connected her laptop using a cable. An example of Akua's connection type is:

- A. Infrared
- B. Bluetooth
- C. Wi-Fi adaptor
- D. Ethernet adaptor

23. The computing teacher advised the students that studying computer networking provides entrepreneurial opportunities. Which statement justifies this advice?

- A. Offering consulting services
- B. Developing video games online
- C. Creating social media platforms
- D. Designing smartphone Apps for schools

24. After replacing his old smartphone, Muba cannot access most saved contacts. His friend advised saving contacts in an email environment. The feature for this is:

- A. draft
- B. folders
- C. attach files
- D. address book

25. In a computing class, a video showed a user gaining unauthorized access to an organization's computer system. This act is termed:

- A. hacking
- B. encryption
- C. cyberbully
- D. authentication

26. An entry on a blog that contains texts, images, or multimedia content is called a:

- A. post
- B. name
- C. status
- D. account

27. A programmer uses a good algorithm to write software. The algorithm is characterized by the following EXCEPT:

- A. efficiency
- B. simplicity
- C. correctness
- D. complexity

28. Robots are used in many areas of society. An example of their application is:

- A. virtual reality
- B. machine learning
- C. artificial intelligence
- D. autonomous vehicles

29. A quiz master asked participants to complete the statement: "While the download folder is the default location for downloaded files, the 'My Documents' folder is the default location for documents _____."

- A. just printed
- B. to be saved
- C. just worked on
- D. to be worked on

30. The term multimedia is widely used in computing. What is the function of a multimedia feature in Word processing applications?

- A. It converts texts into audio formats
- B. It translates texts into different languages
- C. It removes images from word documents
- D. It adds interactive elements like buttons and links

31. In a group presentation, the first step to insert an online video into a slide is to click on the:

- A. Insert tab
- B. Design tab
- C. Online video
- D. Download video

32. A designer reminds staff to use templates in Desktop Publishing because they:

- A. create documents in unique ways
- B. provide a starting point for document design
- C. decorate the document for distribution
- D. allow users to print their work

33. The most appropriate chart to represent how a man shared his property among family members is a:

- A. pie chart
- B. bar chart
- C. line chart
- D. scatter chart

34. The correct syntax of the IF function in Microsoft Excel is:

- A. =IF(logical_test, [value_if_true], [value_if_false])
- B. =IF(logical_test, [value_if_true], [value_if_false])
- C. =IF(logical_test, ([value_if_true]), ([value_if_false]))
- D. =IF(logical_test, TRUE ([value_if_true]), FALSE ([value_if_true]))

35. To send pictures via email (which students struggle with), the most appropriate email feature is:

- A. compose
- B. categorize
- C. **attach files**
- D. draft messages

36. The first step to create a blog for a school assignment is to:

- A. **pick the blog name and niche**
- B. display advertisements
- C. provide consulting services
- D. determine products to sell

37. Pseudocode is best described as a:

- A. compiled programming code
- B. structured programming symbol
- C. flowchart decision using symbols
- D. **step-by-step program outline in informal language**

38. The hexadecimal number A2 converted to binary is:

- A. 10000110
- B. **10100010**
- C. 10010001
- D. 10001010

39. A programmer has indented the code in a program being written. The purpose of indentation is to:

- A. make the code difficult to read by users
- B. hide the code from others when writing it
- C. create bugs in the program to disturb the codes
- D. **show the start and end of a conditional statement**

40. The role of neural networks in Artificial Intelligence in modern technology is to:

- A. control robots within their environment for work and safety
- B. enhance Internet speed for fast movements of the robots
- C. create computer viruses for robots to find solutions to them
- D. **simulate human brain function for learning and problem-solving**

END OF PAPER