THE WEST AFRICAN EXAMINATION
COUNCIL GHANA

BASIC EDUCATION CERTIFICATE Examination

COMPUTING 2 & 1
(ESSAY AND OBJECTIVE TEST)

B.E.E 2024 *2 hours*

Name: ……

Index Number: ……

INSTRUCTIONS

Do not open this booklet until you are told to do so. While you are waiting, read and observe the following instructions carefully. Write your name and index number in ink in the spaces provided above.

This booklet consists of two papers. Answer Paper 2 which comes first, in your answer booklet and Paper 1 on your Objective Test answer sheet provided. Paper 2 will last 75 minutes after which the answer booklet will be collected. Do not start Paper 1 until you are told to do so. Paper 1 will last 45 minutes.

PAPER 2 **1 ¼ hour**

ESSAY
[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 space 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. **Figure 1** shows computer users in a school's computer laboratory.
Study the figure carefully and use it to answer questions **1**(a) *to* **1**(g).

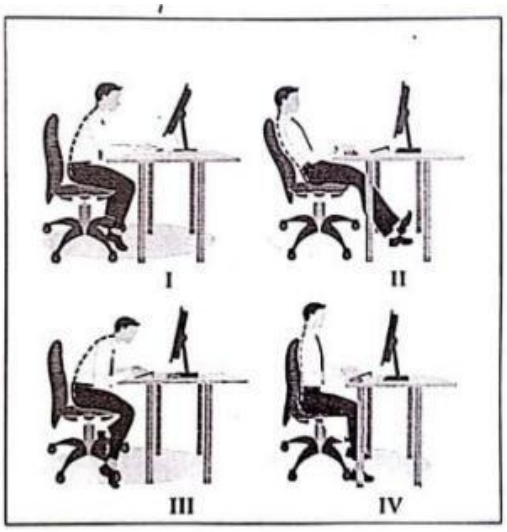


Figure 1

(a) Which of the users has assumed the **correct** sitting posture?

……
[2 marks]

(b) Prolonged use of the computer is associated with health-related problems. Suggest **two** possible safety measures the users should adopt to minimize workstation risks.

(i) ……

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(ii) ……

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[4 marks]

(c) The users were tasked to produce a ten page document using Microsoft Word. Outline the steps to be taken by the users to set the entire ten-page document to 2.0 line spacing.

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[4 marks]

(d) The users were to type a report using Microsoft Word to be presented in class. User **I** typed 10 pages within 3 hours, user **II** typed 8 pages within 4 hours, user **III** typed 5 pages within 6 hours and user **IV** typed 6 pages within 2 hours.

Suggest **two** Microsoft Excel chart types that will be **most** appropriate to show the relationship between the number of pages each user typed and the time spent in typing.

(i) ……

(ii) ……

[2 marks]

(e) The users have been using their computers as standalone. State **two** benefits they will derive when their computers are networked.

(i) ……

(ii) ……

[4 marks]

(f) As a networking consultant, suggest **two** network topologies that could be used to network the computers for the users.

(i) ……

(ii) ……

[2 marks]

(g) The following activities were given to each user to type using Microsoft Word. They were to use Microsoft Publisher to produce a flyer with the typed document to be displayed on the notice

board of each classroom.

School routine activities
7:30 a.m. : Morning assembly
7:40 a.m. : Classes hours
9:40 a.m. : Morning break
10.00 a.m.: Classes hours
12:30 p.m. : Afternoon break
1.00 p.m. : Classes hours
2:30 p.m. : Closing

As a programming student, write an algorithm to demonstrate the activity.

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[6 marks]

SECTION **B**
[36 marks]

*Answe*r **three** *questions* **only** *from this section*

2. (a) Describe the *processor* of a computer to colleagues in your class.

……..

……..

……..

……..
[3 marks]

Study **Figure 2** *carefully and use it to answer questions* **2(***b) and* **2***(c)*



Figure 2

(b) Write the name of the image shown in Figure **2**.

……
[2 marks]

(c) Describe to your colleagues, how the image shown in Figure **2** is accessed for information.

…….....

…….

…….

……..

……..

……..
[4 marks]

(d) File extension is very important in naming a file. List **three** file extensions to be presented in the next computing class.

(i) ……..

(ii) ……..

(iii) ……..

[3 marks]

3. (a) The head teacher of ABC JHS bought the following items for school. 10 footballs for GH₵ 2,000.00, 20 notebooks for GH₵ 400.00, 50 pens for GH₵ 250.00, 8 registers for GH₵ 240.00 and 2 laptop computers for GH₵ 7,000.00.

(i) How many columns and rows are needed to create a table for the head teacher's items bought including ABC JHS as heading for the table without the serial numbers of the items?

……..

……..

[2 marks]

(ii) Outline the steps to be followed to create the table mentioned in **3**(*a*)(i) using Microsoft Word.

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[2 marks]

(b) The file size of a presentation created by a student is too large to be sent through e-mail to a friend. Suggest **one** possible reason for the large file size.

(i) ……

……

[2 marks]

(c) State **one** feature of Microsoft Publisher.

(i) ……

……

[2 marks]

(d) *Study the* Microsoft Excel worksheet *carefully and use it to answer the question that follows*.

	A	**B**	**C**	**D**	**E**
1	NAME OF STUDENT	TERM 1	TERM 2	TERM 3	TOTAL
2	Kofi Malik	84	75	88	247
3	Ama Ghana	85	74	86	245

Write a function in Microsoft Excel to determine the **lowest** termly score for Kofi Malik.

…….....

[2 marks]

4. (a) Computer networks come in several topologies. State **two** features of the ring topologies.

(i) …….

…….

(ii) …….

…….

[4 marks]

(b) Abu, the leader of a class does not understand how to use the *Forward all* feature in an e-mail to send a message to everyone in the class. Explain to Abu what *Forward all* means.

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[3 marks]

(c) A computing teacher has given a class an assignment to design a personal blog. What **two** design features should be used to design the blog?

(i) ……

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(ii) ……

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[4 marks]

(iii) Write the name of **one** tool that can be used to design the blog.

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[1 mark]

5. (a) In computer operation, expressions are evaluated using operator precedence approach. Follow the approach and evaluate the expression:
(1+3)*5+7

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[3 marks]

(b) How would you describe the term *decomposition* in programming to a friend who was not in class when it was taught?

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[3 marks]

(c) Mention **three** software packages that are used in the construction of robotic artifacts.

(i) ……

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(ii) ……

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(iii)……

……

[3 marks]

(d) Write a possible IF-THEN statement for an imaginary expert system to execute the statement:

You are a Monday born and a female which means you are called Adwoa.

……

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…….

[3 marks]

END OF ESSAY TEST

PAPER 1
OBJECTIVE

Answer **all** *the questions*.

Each question is following by **four** *options lettered* A *to* D. *Find the* **correct** option for **each** *question and shared in* **pencil** *on your answer sheet the answer space which bears the same letter as the option you have chosen. Give only* **one** *answer to* **each** *question.* An example is given below.

Which of the following is an input device?

A. Monitor
B. Projector
C. Speaker
D. Stylus

The correct answer is stylus which is lettered D *and therefore answer space* D would be shaded.

[A] [B] [C] [D] [E]

Think carefully before you shade the answer spaces. Erase completely any answer you wish to change.

Do all rough work on this question paper. Now answer the following questions.

1. A student in the computer laboratory wants to change the style, size and colour of a typeface in Microsoft Word application. The appropriate tool to be used is
A. font.
B. styles.
C. clipboard.
D. paragraph.

2. A quiz master asked participants to complete the statement: whiles the Internet Explorer is used to access information from the internet, Windows File Explorer is used to
A. browse the internet using explorer.
B. edit files in the explorer window.
C. Manage and organize files and folders.
D. Manage and organize music and videos.

3. The concept of Artificial Intelligence's ability to suggest related information to a user who regularly surfs the internet is referred to as
A. deep learning.
B. neural network.
C. computer vision.
D. logical reasoning.

4. A blog has many sections. The purpose of the comment section is to
A. share personal information with readers.
B. promote other blogs on the same platform.
C. engage with readers and encourage discussion.
D. sell products and services to readers and friends.

5. In a printing industry, the device that uses the mechanism of laying down a transparent dye and melting dots of wax-based ink to produce an output is a
A. wax heater.
B. wax printer.
C. thermal heater.
D. thermal printer.

6. Collaborative robot is a category of robots that
A. works alongside humans.
B. paints pictures for commercial sake.
C. makes both fast and slow movements.
D. dances to audience for entertainment.

7. A student inserted a picture into a Microsoft PowerPoint presentation and needed to work on the picture to adjust the brightness and contrast to make it more clearer. The **best** tool to help the student achieve the task is
A. Picture Size.
B. Format Picture.
C. Picture Layout.
D. Picture Effects.

8. A student is watching video from a pen drive using a computer. The process the computer uses to access the video from the pen drive is known as
A. burning.
B. caching.
C. reading.
D. writing.

9. What does the formula = IF(A1>10, "Pass","Fail") do in a Spreadsheet application?
A. Checks if the value in cell A1 is equal to 10 and returns Fail
B. Checks if the value in cell A1 is less than 10 and returns Pass
C. Checks if the value in cell A1 is greater than 10 and returns Fail
D. Checks if the value in cell A1 is greater than 10 and returns Pass

10. A teacher tasked students to demonstrate an activity using a flowchart diagram. The appropriate symbol to use at the processing stage of the activity is
A. oval.
B. rhombus.
C. rectangle.
D. parallelogram.

11. Settings and permissions that are specific to a user and determines the activities the user can perform on windows environment on the computer is known as
A. log.
B. account.
C. customization.
D. configuration.

12. Good health practice suggests that we take intermittent breaks while working. The importance of taking breaks during prolonged computer use is to
A. increase productivity in users.
B. conserve energy in the computer.
C. avoid eye strain and muscle fatigue.
D. increase screen time when working.

13. Four students in a class wrote the following function in Microsoft Excel. Which of the functions written by the students will return an output?
A. =SUM(10A:A17)
B. =SUM(10A:17A)
C. =SUM(A10:A17)
D. =SUM(A10:17A)

14. To demonstrate to a class, the steps to be taken to create a PivotTable from a set of data in Microsoft Excel worksheet, click on
A. Home Tab, then PivotTable.
B. Insert Tab, then PivotTable.
C. Data Tab, then PivotTable.
D. View Tab, then PivotTable.

15. In a computer shop, the attendant advised a customer to buy the fifth generation computer due to its feature that uses
A. transistors.
B. vacuum tubes.
C. microprocessors.
D. artificial intelligence.

16. The social media platform that allows members to post questions, start a discussion or contribute to various discussions is
A. Forums.
B. Facebook.
C. Messenger.
D. WhatsApp.

17. The introduction of Artificial Intelligence as come with its related ethical concerns such as
A. job creation.
B. bias in algorithm.
C. improved healthcare.
D. increased productivity.

18. A user who selected 4x3 in the insert table grid in a Word document will insert
A. 4 tables.
B. 12 tables.
C. a table of 4 rows and 3 columns.
D. a table of 4 columns and 3 rows.

19. The Screenshot feature under the Insert Tab of a Microsoft PowerPoint application allows a user to insert a screenshot of
A. active application.
B. opened applications.
C. foreground applications.
D. downloaded applications.

20. The examination scores in Computing of a class was entered into a Microsoft Excel worksheet. The appropriate function for finding the **largest** score in the class is
A. AVG.
B. MIN.
C. MAX.
D. SUM.

21. In pseudocode, the keyword FOR indicates
A. variables or constants in the code.
B. input or output structure in the code.
C. decision control structure in the code.
D. loop with fixed number of iterations in the code.

22. The central device that communicates with other network devices and manages resources is a
A. hub.
B. client.
C. server.
D. switch.

23. A user is to apply predefined formatting styles to texts in Microsoft PowerPoint application. The **best** features to use is
A. WordArt.
B. Text Effects.
C. Font Colour.
D. Quick Styles.

24. The robotic club of a school is to construct a robot to be able to detect objects around it. The **most** appropriate sensor to be used is
A. light sensor.
B. tactile sensor.
C. torque sensor.
D. proximity sensor.

25. A teacher tasked her students to create a date with year, month and day format. The **most** appropriate Microsoft Excel function to achieve the date format is
A. DATE().
B. DATEDIF().
C. CURDATE().
D. DATEVALUE().

26. Cybercriminals can obstruct data in transmission to and from a device or a network using a data threat attack technique called
A. fabrication.
B. interruption.
C. interception.
D. modification.

27. A teacher sends class assignment to his students using an e-mail. The protocol used by the e-mail to send the assignment over the internet is
A. FTP
B. TCP
C. HTTP
D. SMTP

28. The **Merge & Centre** button in a Spreadsheet application is used to
A. select multiple cells and center the content.
B. create a new worksheet and center the content.
C. combine and center the content of selected cells.
D. combine and center the content of the worksheet.

29. Arku entered 20 into a computer as quantity of pencils bought. How will the figure be represented in the computer for processing?
A. 10010
B. 10011
C. 10100
D. 11001

30. Cindy was trying to access information from the WAEC website but whenever she enters the URL, it takes her to a different website. Her friend advised that she must ensure the URL entered is correct because it identifies
A. ads in the web resource.
B. the texts of the web resource.
C. the address of the web resource.
D. graphics used in the web resource.

31. In Desktop Publishing, a user can create a new document through the following ways **except** for
A. print publication.
B. built-in template.
C. blank publication.
D. featured template.

32. The Desktop Publishing feature that **best** helps a user to align objects, texts and elements in a publication is called
A. ruler.
B. layout.
C. guides.
D. margins.

33. One of your classmates continuously sends threat messages through social media platforms to you. This act is known as
A. cyberattack.
B. cyberstalking.
C. cybersecurity.
D. cyberbullying.

34. A computing project work requires students to design a blog for a school. The **best** item to be used for customizing the blog is the school's
A. flag.
B. logo.
C. crest.
D. uniform.

35. Computer manufacturing went through series of developmental stages with each stage characterized by a unique technological advancement. The use of integrated circuits is a characteristics of the
A. first generation.
B. second generation.
C. third generation.
D. fourth generation.

36. In computer programming, debugging is a technique used to
A. test the code.
B. fix errors in the code.
C. create bugs intentionally.
D. write code to play games.

37. Which of the following services **best** describes an entrepreneurial opportunity in computer networking?
A. Teaching desktop publishing in schools
B. Developing game applications for schools
C. Designing websites for businesses and schools
D. Setting up Wi-Fi networks for cafes and schools

38. The peripheral device shown in Figure **1** is used to capture



Figure **1**
A. audio data.
B. video data.
C. image data.
D. textual data.

39. The practice of the use of computers and related electronic resources in an environmentally responsible manner is termed
A. ergonomics.
B. green computing.
C. safety precautions.
D. environmental friendliness.

40. Social media users can regulate the type of information they share on their pages. Privacy setting which is one of such activities they can regulate is to
A. make posts visible to everyone.
B. prevent one from using the platform.
C. automatically share posts with everyone.
D. control who can see one's posts and information.

END OF PAPER