Name:...

Index Number:..

Signature: ....

Date of Examination: ....

Basic Education Certificate Mock Examination

COMPUTING 2 & 1   2 hours

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**, **index number**, **signature** and **date of** examination in ink in the spaces provided above.

This booklet consist of **two** papers. Answer Paper 2 which comes first, in the booklet and Paper 1 on your Objective Test answer sheet. Paper 2 will last 1 hour 15 minutes. **Do not** start Paper 1 until you are told to do so. Paper 1 will last for 45 minutes. At the end of the examination, 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.

For Examiners's Use Only	
Question Number	**Marks**
TOTAL	

PAPER 2

                                      ESSAY   1 hour

*This paper consists of **two** sections: A and B. Answer Question 1 in Section A and any other **three** question 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.   (a)   The *Figure 1* below is a structure of a school's network system. Study it and use it to answer the questions below
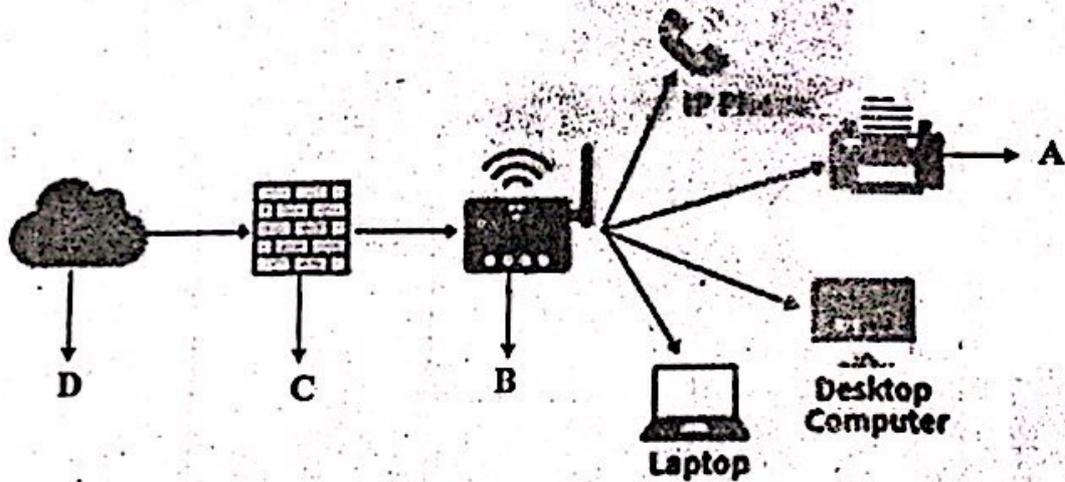
Figure 1

   (i)   A school wants to protect its internal network from unauthorized access from the Internet. Which device in the diagram performs this function?

....

                                                                       [2 marks]

i) Teachers complain that they cannot access online learning websites. Which component connects the school network to the global network?

....

[2 marks]

(iii) A student connects a laptop to the school network without using a cable. Which device enables this wireless connection?

....

[2 marks]

(iv) The ICT teacher explains that data must pass through a security device before reaching computers. Which device checks and controls incoming and outgoing data?

....

[2 marks]

(v) The Internet connection is disconnected, but computers can still communicate with each other. Which device makes this possible?

....

[2 marks]

(vi) The school wants all devices to share one Internet connection safely. Name two (2) devices in the diagram that help achieve this.

....

....

[2 marks]

(vii) Identify the parts labelled A, B, C and D in the image 1 above.

....

....

....

....

[4 marks]

b) (i) Outline the steps to add an attachment to an email.

....

Turn Over

ITEM	DATA TYPE
20001002342	
Month of Examination	
=Product(A34:F35)	
=C3+C8+B3+B8*	
Academic work	
=AVERAGE(A21:F45)	

Table 1   [6 marks]

2 (a) Briefly explain the following major data threats in information security
        (i)   Data Fabrication

        ....

        ....

        ....
                                                                  [2 marks]

        (ii) Data interruption

        ....

        ....
                                                                  [2 marks]

        (iii) Data Interception

        ....

        ....

        ....
                                                                  [2 marks]

                                                          Turn Over

(iv)   Data Modification

....

....

....

[2 marks]

(b)   *Table 2* contains data to be used in programming. Complete the table by indicating, against each data the data type to be used when writing the programming code.

#	Data	Data Type
i	Name of a person	
ii	Age of a person	
iii	Date of birth of a person	
iv	True or False	

Table 2   [4 marks]

4.   (a)   (i)   Explain the term *'wearable computer'*.

....

....

[2 marks]

(ii)   Give *three* (3) examples of wearable computers.

....

....

....

[3 marks]

(iii)   State any *two* (2) applications used by wearable computers.

....

....

[1 mark]

(b) State *three* (3) important aspects of scratch?

....

....

....

[6 marks]

5. (a). *Explain* the following as used in Microsoft Excel or Spreadsheet Application;
    (i) *Templates*

    ....

    ....

    ....

    [2 marks]

    (ii) *Macros*

    ....

    ....

    ....

    [2 marks]

(b) (i) State two (2) techniques hackers use on their victims.

    ....

    ....

    ....

    [4 marks]

    (ii) Outline two (2) differences between Bluetooth and Wi-Fi?

    ....

    ....

    ....

    [4 marks]

Turn Over

END OF ESSAY TEST

Answer all the questions

Each question is followed by **four** options lettered A to D. Find the correct option for **each** question and shade 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 examples is given below:

Which of the following is an input device?
A. Monitor
B. Stylus
C. Projector
D. Speaker

The correct answer is Stylus, which is lettered B and therefore answer spaces B would be shaded.   [A]   ~~[B]~~   [C]   [D]

Think carefully before you shade the answer spaces; erase completely any answers you wish to change.

Do all rough work on this question paper

Now answer the following questions

1. The process of dividing the disk into tracks and sectors is called
   A. Tracking
   B. Allotting
   C. Crashing
   D. Formatting

2. Complex scientific research is usually done using
   A. Microcomputers
   B. Supercomputers
   C. Minicomputers
   D. Mainframe computers

3. The main component that formed the basis for the second generation of computers was
   A. Vacuum tubes
   B. Transistors
   C. Registers
   D. Integrated circuits

4. Which of the following is the secondary storage device that uses a long plastic strip coated with a magnetic material as a recording medium?
   A. Compact disk
   B. Hard disk
   C. Magnetic tape
   D. None of the above

5. Which generation of computers used very large-scale integration (VLSI)?
   A. First generation
   B. Second generation
   C. Third generation
   D. Fourth generation

6. All of the following are portable computers **except**;
   A. Video game consoles
   B. Laptop computers
   C. Notebook computers
   D. Tablet computers

7. A tablet is a computer that looks li notebook computer, accepts data t can be entered using;
   A. a keyboard

Turn

B.   a touch screen
C.   a digitizing tablet
D.   all of the above

8.   The Apple watch® is an example of
A.   a wearable computer
B.   an embedded computer
C.   a first-generation computer
D.   a video game console

9.   An embedded computer can be found in a ....
A.   laptop computer
B.   desktop computer
C.   washing machine
D.   notebook computer

10.   What is the recommended resolution for images used in a desktop-published document?
A.   72dpi
B.   300 dpi
C.   600 dpi
D.   1200 dpi

11.   Which one of the following is not a means of delivering a presentation using PowerPoint?
A.   Slide show on a PC
B.   Printed handout
C.   Handwritten notes
D.   Digital projection

12.   Which one is not a pane in the Normal view?
A.   Outline pane
B.   Slide Development pane
C.   Slide Show pane
D.   Notes pane

Use the statement below to answer questions 13 to 15.

```
Dim Mynumber As Integer
        Mynumber = 5
        If mynumber > 0 Then
        MsgBox"The condition
evaluates to true."
End If
```

13.   What type of data is stored in the variable Mynumber?
A.   String
B.   Boolean
C.   Integer
D.   Double

14.   Which statement is used to declare variable in the code?
A.   Mynumber = 5
B.   If mynumber > 0 Then
C.   Dim Mynumber As Integer
D.   End If

15.   What condition is being tested in the "If statement"?
A.   If Mynumber equals 0
B.   If Mynumber is less than 0
C.   If Mynumber is greater than
D.   If Mynumber is equal to 5

16.   Arrangement of student position in orderly manner represents..........
A.   Selection.
B.   Iteration.
C.   Decomposition.
D.   Abstraction.

17.   Which of the following technologi used by smart self-driving cars?
A.   Machine learning.
B.   Artificial Intelligence.
C.   Neural Network
D.   All of the above.

18.   The application of game principles solve real-world problems is know as...........
A.   Entertainment
B.   Gaming.
C.   Gameplay
D.   Gamification.

19.   All the following are applications machine learning except..........
A.   Simulation of the human b
B.   Image recognition.

C. Handwriting recognition.
D. Speech recognition.

20. Which of the following allows users to edit entered data?
A. Name box.
B. Formula bar.
C. Tabs.
D. Layout

21. Which of the following number formats should be used for the data "Gh¢100"?
A. Date.
B. Time.
C. Number.
D. Currency.

22. Which of the following number formats should be used for the data "25-Dec-19"?
A. Date.
B. Time.
C. Number.
D. Currency.

23. Which number format displays data exactly as it was typed?
A. Number
B. General.
C. Accounting.
D. Scientific.

24. What kind of attempts are made by individuals to obtain confidential information from a person by falsifying their identity?
A. Computer viruses
B. Spyware scams
C. Phishing scams
D. None of the above

25. Which of the following topologies requires a central controller or hub?
A. Star.
B. Mesh.
C. Ring.
D. Bus.

26. Binary Coded Decimal (BCD) numbers are obtained by........
A. converting decimal numbers to octal.
B. converting binary numbers to decimal.
C. representing each decimal digit in a binary sequence.
D. representing each hexadecimal digit as a binary sequence.

27. How much is one terabyte equal to?
A. 1024 megabytes
B. 1024 bytes
C. 1024 kilobytes
D. 1024 gigabytes

28. The shortcut key to open My Computer is
A. Windows Logo + E
B. Windows Logo + A
C. Windows Logo + M
D. None of the above

29. The feature provided by a desktop publication application to assist a user with the placement and alignment of one object to another object is called....
A. Grids.
B. Guides.
C. Handles.
D. Rules

30. Which of the following error messages in a Spreadsheet application indicates a cell reference error?
A. #REF!
B. #DIV/o!
C. #NAME?
D. #VALUE!

31. Which of the following devices is not a page printer?
A. Bubble printer.
B. Inkjet Printer.

C. Laser printer.
D. Dot Matrix printer.

32. The motherboard is regarded as the most important component of the computer because it...
A. is the largest component.
B. is the most expensive component.
C. connects all other components of the computer.
D. stores all the information and configurations in the computer.

33. The following devices are used to capture graphics, sound, or video into the computer except......
A. microphone.
B. webcam.
C. digital camera.
D. game pad.

34. Which of the following entries is a correctly entered formula in a spreadsheet application?
A. = 9A: B9
B. =MAX(A1:A10)
C. SALESFIGURES
D. =AVERAGE-C17*C18)

35. Which of the following shortcut key commands enables a user to move to the previous worksheet on a spreadsheet application?
A. Ctrl + PgUP
B. Ctrl + PgDn
C. Ctrl + Tab.
D. Shift + Tab

36. Loss of power and unauthorized change in the functional unit of hardware come under the problems and issues of the physical layer.
A. True
B. False

37. There are................ main alignments
A. 5
B. 4
C. 3
D. 2

38. The difference between a virus and a self-replicating program that is like a virus is that, rather than creating copies of itself on only one system, it propagates through a computer network. What is the self-replicating program called?
A. Keylogger
B. Cracker
C. Worm
D. All of the above

39. Convert the decimal 453 to a Binary number.
A. 100001101_2
B. 110001101_2
C. 001110111_2
D. 110000011_2

40. Convert the decimal 1322 to hexadecimal.
A. $53C_{16}$
B. $52CA_{16}$
C. $25A_{16}$
D. $52A_{16}$