**451/1**

**NAME…………………………………………….……. INDEX NO………..…………………..**

**SIGNATURE……………………………….………………DATE……………………………..**

ASUMBI GIRLS HIGH SCHOOL

 POST -MOCK 1

AUGUST/SEPTEMBER

2022

 **AUGUST / SEPTEMBER - 2022**

**COMPUTER STUDIES**

**PAPER 1**

**(THEORY)**

**Instructions to Candidates**

1. *Write your Name, Admission number and Class in the spaces provided above.*
2. *This paper consists of* ***two*** *sections****; A*** *and* ***B****.*
3. *Answer* ***ALL*** *the questions in section A*
4. *Answer question 16 and any other THREE questions from section B*
5. ***ALL*** *answers should be written in the spaces provided on the question paper.*
6. ***This paper consists of 7 printed pages.***
7. ***Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing****.*
8. ***Candidates should answer the questions in English***

**SECTION A (40 MKS)**

**Answer all questions in this section.**

1. State the software technological differences between the second generation and the third generation computers [2 marks]
2. State **two** ways of ensuring proper ventilation in a computer room [2 marks]

3. Convert the decimal number 20.375 to it binary number system equivalent [3 marks]

1. Pat has installed internet in his home computer in order to use it for browsing. State three ways in which he would prevent viruses from infecting the computer. [3 marks]
2. State **three** ways of transforming a picture embedded in a Desktop Publishing programme in order to fit in a designated space on a computer. [3 marks]
3. Distinguish between a line printer and a page printer as used in computers. [2 marks]
4. Describe virtual reality as used in computers. [2 marks]
5. State the function of each of the following features of an email software
6. Inbox [1 mark]
7. Draft [1 marks]
8. a) Explain the term toggle key as used in computer keyboard [2 marks]

b) List two examples of toggle keys on a keyboard [2 marks]

10. State the type of error that would occur in data processing for each of the following cases:

a) Entering the number 315 instead of 351 [1 marks]

b) Entering the text “Kwys” instead of “Keys” [1 mark]

11. State **four** factors to consider when selecting an input device for use in a computer room. [4 marks]

12. State **three** functions of Un-Interruptible Power Supply (UPS) [3 marks]

13. Distinguish between a page break and a column break as used in a word processor. [3 marks]

14. State **three** factors to consider when selecting an operating system to install in a computer. [3 marks]

15. Differentiate between analogue signal and digital signal as used in computers. [2 marks]

**SECTION B (60 marks)**

**Answer ALL questions from this section in the spaces provided.**

16. a) Explain the term dry running as used in program development. [2 marks]

b) Describe **three** properties of an algorithm. [3 marks]

c) Write an algorithm using both pseudocode and flow chart to print the sum and average of numbers from 1 to n where n is provided by user and n>=1. [10 marks]

17. a) State **four** outcomes that may result from using incorrect requirement specifications during system development. [4 marks]

b) A school opted to use direct change over approach when installing a new system. Explain three challenges that the school may face as a result of this approach. [6 marks]

c) State **three** reasons that may lead an organization to install an intranet. [3 marks]

d) The figure below shows a coaxial cable. State the function of the part labelled A. [2 marks]



**A**

18. Use the figure below to answer the questions that follow:



a) Give the name of the above network topology [1 mark]

b) State three disadvantages of the above topology [3 marks]

c) A publisher intends to use a desktop publishing programme to create a publication which is to have many graphics. State three ways in which the graphics may be acquired for this purpose. [3 marks]

d) Interpret each of the following spreadsheet formula:

1. =count if (D2:D9,”>” B4) [2 marks]
2. =sumif (B3:B11,”4M”, D3:D11) [2 marks]

e) i) The following are the fields of products table in a database created to store records of products manufactured in factory:

* Product number
* Product name
* Price
* Product description

I. State the appropriate data type for each field [4 marks]

19. a) Explain **three** features of a graphical user interface as used in computers. [6 marks]

b) State the function of each of the following computer keyboard keys:

 i) Caps Lock [1 mark]

ii) Shift [1 mark]

1. Home [1 mark]

c) Using two’s complement notation, determine the value of the operation 2510 – 2910. [6 marks]

20. a) Distinguish between a computer drive and computer driver. [2 marks]

 b) State **two peripheral** devices connected to the computer via PS/2 [1 mark]

 c) Jane encountered desktop computer with the following features

* 3.0 USB ports
* 4.0 GB primary storage
* 19” TFT VDU
* 500 SATA HDD
* Linux 7.1
* AVG antivirus
1. Give 3 reasons for wide use of USB gadgets in the society today. [3 marks ]
2. What is the meaning of the following specifications:
3. *4.0 GB primary storage* [1 mark]
4. *19” TFT VDU* [1 mark]
5. *500 SATA HDD* [1 mark]
6. *Linux 7.1* [1 mark]

iii) Give **three factors** to consider when selecting an **OS** to install in your computer. [3 marks]

iv). Describe **two symptoms** of a computer infected by virus. [2 marks]