

ASUMBI GIRLS HIGH SCHOOL
POST -MOCK 1
AUGUST/SEPTEMBER
2022

COMPUTER PP1 MS

Instructions to Candidates

- (a) Write your Name, Admission number and Class in the spaces provided above.*
- (b) This paper consists of **two** sections; **A** and **B**.*
- (c) Answer **ALL** the questions in section A*
- (d) Answer question 16 and any other **THREE** questions from section B*
- (e) **ALL** answers should be written in the spaces provided on the question paper.*
- (f) This paper consists of 7 printed pages.***
- (g) **Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.***
- (h) **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]
2nd generation used assembly languages while 3rd generation used high-level languages
2. State **two** ways of ensuring proper ventilation in a computer room [2]
 - **Wide windows**
 - **Use of vents/ventilators**
 - **Air-conditioners/dehumidifiers/fans**
 - **Providing spacious environment**
 - **Avoid over crowding**
3. Convert the decimal number 20.375 to its binary number system equivalent [3]
 $20_{10} = 10100_2$
 $.375 \times 2 = 0.75$
 $.75 \times 2 = 1.5$
 $.5 \times 2 = 1.0$
Hence $20.375_{10} = 10100.011_2$
4. 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]
 - **Using antivirus software**
 - **Surfing smart e.g. avoid certain sites/avoid downloading certain attachments**
 - **Use of firewalls to prevent certain attachments/hackers**
 - **Use of complex password to restrict data access**
 - **Scanning downloads**
 - **Enabling the security settings in the browser**
5. 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]
 - **Rotation**
 - **Flipping**
 - **Cropping**
 - **Stretching**
 - **Resizing**
6. Distinguish between a line printer and a page printer as used in computers. [2]
Line printer prints one line of text at a time while page printer prints a whole page at a time

Line printer is impact while page printer is non-impact

Line printer is slow while page printer is fast
Line printer is noisy while page printer is quiet
7. Describe virtual reality as used in computers. [2]
Computer generated simulation of a three-dimensional image/environment that can interacted with in a seeming real or physical way by a person wear specialized head gear.

8. State the function of each of the following features of an email software
- a) Inbox [1]
Storage location where new email messages are stored.
- b) Draft [1]
A storage location where messages composed but not yet sent are stored
9. a) Explain the term toggle key as used in computer keyboard [2]
Keys that alternate the input mode. When pressed ON they intended to perform a task, when pressed OFF, they perform a different task.
- b) List two examples of toggle keys on a keyboard [2]
Caps lock, Insert, Num lock and Scroll lock
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]
Transposition error
- b) Entering the text “Kwys” instead of “Keys” [1]
Transcription error
11. State **four** factors to consider when selecting an input device for use in a computer room. [4]
- **Compatibility with existing system**
 - **Cost of the device**
 - **Extra features in the device**
 - **Purpose of the device**
 - **Nature of data to be captured**
 - **Portability**
12. State **three** functions of Un-Interruptible Power Supply (UPS) [3]
- **Stabilizes power**
 - **Stores power**
 - **Alerts user through an alarm system when power is down**
13. Distinguish between a page break and a column break as used in a word processor. [3]
Page breaks marks the end of a page while column page marks the end of a column
- NB. Accept illustrations
14. State **three** factors to consider when selecting an operating system to install in a computer. [3]
- **Hardware configuration a computer e.. RAM.HDD, and othersystemrequirements**
 - **Type of computer in terms of size and make**
 - **User-friendliness**
 - **Number of users it can support**

- Cost

- **Applications intended for use in the computer**

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

Analog data uses values that change continuously while digital uses values that are discrete

NB. Accept illustrations

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]

Process where a programmer manually (pen & Pencil) work through a code to trace the values of variables and to identify errors

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

_Must have a start and a stop

-Steps must be precise

- Statements must not have more than one meaning/no ambiguity

- There should be clear indentation of statements

- Input,Output and Processing statements should be clearly defined using keywords

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 $n \geq 1$. [10]

Start

Sum=0, k=1

Read n

If $n \geq 1$ then

Repeat

Sum=Sum + k

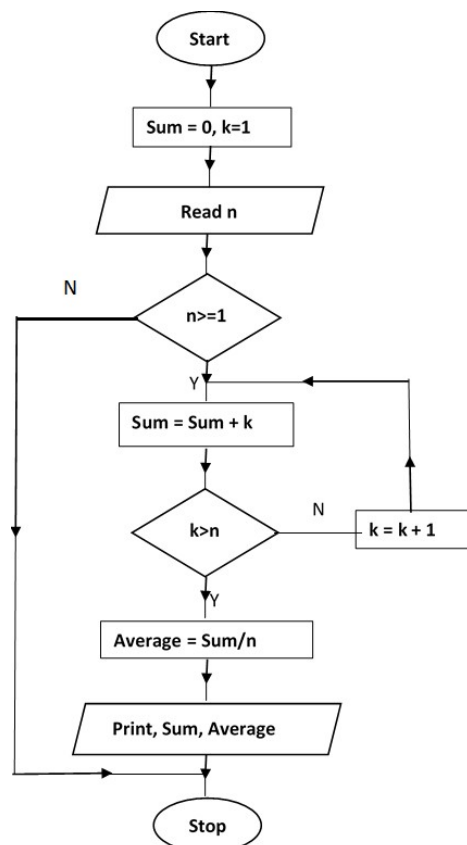
k=k+1

Until k=n

Average=Sum/n

Print Sum, Average

Stop



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

- **System may end up being costly**
- **System may be delivered late**
- **System may not meet user specification**
- **Higher cost of maintenance**
- **System may be unreliable and prone to errors**
- **System may not meet legal requirements**

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]

- **In case of a problem there will be no fall back**
- **There will be less time for users to familiarise themselves with new system**
- **Possibility of sabotage by users because of less time to monitor and manage stress resistance**

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

- **to isolate resource from the internet**
- **to provide communication and collaboration amongst organization staff**
- **to publish and share valuable information easily with users**
- **to safely run critical applications**

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



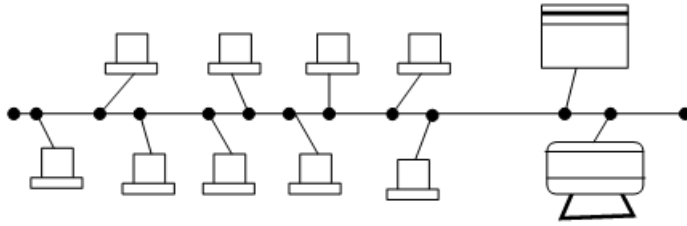
A

Used to provide insulation

To block electromagnetic fields from interference

To protect signal distortion

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



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

Bus

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

- Slow
- T-Joints weaken the signal (BNC connectors)
- A bus that is not terminated causes Ringing

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]

- Using digital camera
- Scanning the graphics from other sources
- Downloading from the Internet
- Drawing/Drawing tools
- Clipart

d) Interpret each of the following spreadsheet formula:

i) =count if(D2:D9,">"B4) [2]

Count those values in the range D2;D9 with values greater than the value in cell B4

ii) =sumif(B3:B11,"4M",D3:D11) [2]

Sum the values in the cell range D3;D11 for records whose corresponding values in cell range B3:B11 equals to "4M"

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

- Product number **Autonumber/Text**
- Product name **Text/String**
- Price **Currency/Number**
- Product description **Memo/Text/String**

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

-Mouse

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

i) Give 3 reasons for wide use of USB gadgets in the society today. [3]

ii) Allows multiple peripheral devices on a single port

Quality data transmission

Faster data transmission

iii) What is the meaning of the following specifications :

- 4.0 GB primary storage [1]

-19" TFT VDU [1]

- 500 SATA HDD [1]

-Linux 7.1 [1]

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

- Processor speed

- Purpose of the computer

- Memory size

- Compatibility and

- Upgradeability

- User needs

- User friendliness

- Make of the computer

iv). Describe **two symptoms** of a computer infected by virus. (2)

-Hang ups

-Shutting down frequently

-Error messages

-Quizical messages

-file increase and decrease