



SECTION A (One mark each)

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|------|------|-------|-------|-------|
| 1. A | 5. D | 9. B | 13. D | 17. D |
| 2. B | 6. D | 10. C | 14. B | 18. C |
| 3. C | 7. C | 11. C | 15. A | 19. D |
| 4. D | 8. C | 12. C | 16. D | 20. B |

SECTION B (60 MARKS)

20. (a) Explain the meaning of the term database management system? (2 marks)
Software program that involves creating, modifying, deleting and adding data files and using this data to generate reports.
- (b) Define the following terms as used in a database. (2 marks)
- i. Primary Key
☐ An attribute of a relation that uniquely identifies all the other attributes
- ii. Record
☐ collection of related fields (data items)
- (c) State four properties to be put in place during table design to ensure integrity of the data entered. (4 marks)
- ☐ Data type
☐ Validation/Validation rule
☐ Input mask
☐ Setting required/null value status
☐ Field size
☐ Caption
- (d) In a database system, data integrity ensures the correctness and completeness of the data in the database. Differentiate between the following types of integrity constraints below: (2marks)
- Validity integrity and Entity integrity
Validity integrity ensures that the data fields contain the correct data type while Entity integrity ensures that each row of a table has a unique and non-null Primary key value.
22. Ventilation is an important practice in the computer lab because it enhances proper circulation of air.
- (a) Outline four ways in which air is regulated in the computer room. (4 Marks)
- ☐ Avoid overcrowding of either machines or users in the room
☐ Ensure that the room has enough ventilation points like windows
☐ installing air conditioners
☐ install fans in the room
- (b) What do the following control measures against computer crime involve? (6 Marks)
- i) Audit trail
Careful study of an information system by experts to establish all weaknesses in a system that could lead to security threat.
- ii) Data encryption
☐ Combination of letters and characters that deter unauthorized access

iii) **Log files Passwords**

Combination of characters that deter unauthorized user from accessing data.

23. (a) **Mawolu high school has decided to automate its library for effective services to the students. Identify five methods they are likely to use to gather information during system development. (5 Marks)**

- ☐ Questionnaires
- ☐ Interviews
- ☐ Observations
- ☐ Note taking
- ☐ Study available documents
- ☐ Tape recording

- (b) **File organization refers to the arrangement of records on secondary storage.**

Briefly describe the following file organization methods. (3 Marks)

Serial

- ☐ Records are placed on the disk with no particular order.

Sequential

- ☐ Records are placed on disk according to a specific field

Random

- ☐ Records are placed on disk directly instead of requiring other files be read first.

24. (a) **Differentiate between streaming and downloading (2 marks)**

Downloading Process of transferring information from remote computer to local storage.
While Streaming Process of accessing content of a file before it is completely downloaded

- (b) **What do the following terms mean in relation to internet? (3 Marks)**

(i) **Hyperlink**

Text or picture in an electronic document

(ii) **Web browsers**

Applications that enable a person to access the internet.

(iii) **Internet service providers**

Companies that offer internet services to end users.

- (c) **State five reasons that may lead an organisation to install an intranet.(5 marks)**

- ☐ To isolate the organizational resources from the internet/security.
- ☐ To provide communication and collaboration among individual within the organization/remote control.
- ☐ To publish and share valuable information among the users easily, inexpensively and effectively via portals and intranet website/resource sharing.
- ☐ To run critical applications that support business decision making.
- ☐ To distribute processing facilities.
- ☐ For cost Effectiveness.
- ☐ To protects signal distortion.
- ☐ To Protect signal interference.

25. (a) **Differentiate between sorting and filtering as used in electronic spreadsheet program (2 marks)**

Sort is to arrange data in a predefined order either ascending or descending.
While filtering is a quick and efficient method of finding and working with a subject within a list.

- (b) **Interpret each of the following spread sheet formula:**

(i) =countif(D2:D9,">=\$B4) (2 marks)

Count those value in the range D2 :D9 with values greater than the value in cell B4).

- (ii) =sumif(B3:B11,"4M",D3:D11) (2 marks)
Sum the values in the cell range D3 : D11 for records whose corresponding values in cell range B3 : B11 equals to "4M"

(c) List four factors to consider when deciding on the choice of electronic data processing method (4 Mark)

- ☐ Suitability of accumulating data
- ☐ Response time
- ☐ Cost of initial installation and operations
- ☐ Ease of development and subsequent maintenance

26. (a) Explain four features of a graphical user interface as used in computers (4 marks)

- ☐ Windows — a rectangular area on the screen where the commonly use application run.
- ☐ Icons — A picture or symbol which is used to represent a software application or hardware device.
- ☐ Menus — a list of options from which the user can choose what that they require.
- ☐ Pointer — a symbol such as arrow which moves around the screen as the user move the mouse.

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

- (i) Caps Lock (1 marks)
- ☐ It's a toggle key when ON, the characters typed are in uppercase when OFF, the characters typed are in lower case.
- (ii) Shift (1 marks)
- ☐ Used to enable uppercase letter to be printed when alphanumeric keys are pressed. @!
 - ☐ Used with other keys to modify behavior/function key.
- (iii) Home (1 marks)
- ☐ Used to take the cursor to the beginning of the line in a word processor. @!
 - ☐ Evidence of movement of the cursor.

(c) Describe the role of an operating system in

- i. Memory management (1 mark)
Load application programs from external storage in to main memory. Also note the part of main memory in use and free
- ii. Job scheduling (1 mark)
Prepares jobs for continuous execution determining the first task to be done and last one.
- iii. Error handling (1 mark)
Reports errors that occur during execution

SECTION C (20 MARKS) Attempt only one question

27. (a) Distinguish between bespoke and standardized application software. (2 marks)

- In-house = customized or tailor-made software
- Standardized = General purpose or off-the shelves/packages applications.

(b) Goggolimbo is running a business of graphics and stationary in Buyuki Town. He is in need of computers to expand his business to serve his customers better. You have been approached, as a student of computer studies to explain possible specifications (18marks)

Consider;

- *System brand. Whether branded or crone computers*
- *Processing speeds – nature of cpu*
- *Price and buyers budget*
- *Needs and nature of the organization*
- *Ram capacity*
- *Nature of system drives*
- *Compatibility of the system with the available tools, programs and personnel.*
- *Nature and number of available ports*
- *Documentation*
- *Authenticity of devices if not fake or duplicate devices*
- *Guarantees and warranties*
- *Dealers after sales services.*
- *Organizations buying or procurement laws*
- *Nature of the seller/supplier*

28. (a) Identify and explain the resources that make Internet a very useful tool to mankind. (10marks)

- *E-mails*
- *World Wide Web*
- *VoIP – Telephone services*
- *FTP*
- *News groups*
- *Search engines*
- *E-books and journals*
- *Social networks*
- *Chart services*
- *E-medicines*
- *Telnet*
- *U-tube*
- *Remote/sky drives*
- *GPS*

- (b) Explain shortcomings of the internet services to the communities where we live. (10marks)
- High initial cash outlay and periodic subscriptions
 - Virus threats/malicious programs
 - Pornographic sites/controversial content
 - Loss of man-hours as workers engage in personal surfing of social networking during working hours
 - Limited physical contact of the cyber world
 - Internet related crime like hacking, piracy, Cyber bullying, internet scams, etc
 - Limited cyber laws in some countries
 - Plagiarism
 - Information overload
 - Lots of inaccurate information
29. (a) Explain the reason why RAM is said to be Volatile (2 marks)
 RAM is said to be volatile because it loses its content when a computer is switched off.
- (b) Explain four advantages of using primary memory. (8 marks)
- Advantages of primary memory (RAM and Registers)*
- Provide a basis or platform for data processing
 - They are read and write memory devices
 - Can determine the processing speed of the PC
 - Come in a variety of sizes
 - Always available.
- (c) Explain five advantages and five disadvantages of using secondary storage devices. (10 marks)
- Advantages of secondary storage*
- They supplement or backup primary memory
 - Facilitate data transfer
 - Hold data permanently
 - They are available in a variety of sizes
 - Most of them like the HDD offer more storage space if compared with primary memory
 - They are cheaper in terms of data unit cost
- Disadvantages of secondary storage*
- Virus agents and transmitters
 - Relatively limited life span
 - Can be easily lost or misplaced a case for memory cards and flash drives
 - Some are just majorly read only
 - Some like CDs cant withstand dusty environment

END