BUTERE MUMIAS DISTRICT EXAMINATION

451 / 1

COMPUTER STUDIES

PAPER 1

MARKING SCHEME

SECTION A (40marks)
1.   Explain the following terms as used in information Technology with reference to software purchase:-
        i) User friendliness   (1mk)
 refers to how easy the software is to use for the user.

        ii) Authenticity   (1mk)

the genuinessess , validity and / or legitimacy of the software.

2.   In system development testing is one of the critical stages. Give three reasons why the testing phrase is critical to the systems developer.   (3mks)

        -   helps to ensure that the logical and physical designs and environment are to the users satisfaction
        -   helps to detect and correct errors.
        -   Gives prod to those skeptical about the working of the system
        -   Helps to establish how the system works under various conditions allowing for full description of the systm capabilities.

3.   give three ways in which a magnetic tape differs from a magnetic disk

        Magnetic disk   Magnetic tape
        -Tracks are concentric   - tracks are parallel and located longwise
        -move only in one play dissection   - move in two directions(forward and Backwards)
        - Do not come in control with the read   - comes in contact with the read/ write
          / write heed   heed
        - have shorter access time   - have longer access time
        - data accessed by a number of methods   - data accessed only by serial method.

4.   Name the three components of a spreadsheet   (3mks)

        -   Database
        -   Graphs
        -   Worksheet

5.   i) What is a page header   (1mk)

        -   this are the words at the top of every page of document just above the page
            margin

        ii) Differentiate between a page margin and a page border.   (1mk)

6.   State any two differences between function keys and special keys of a keyboard.
                                                                            (2mks)

Function keys	Special keys
- Normal used single to execute a task.	- Normal used in combination with other Keys the execute a task.
- intiate frequently done task to occur	- Give special instructions to the computer.

7.   i) Give any two differences between margin guides and column guides as used in
desktop publishing   (2mks)

        -   column guides help to divide the pages into columns that make the publication
            look more organized and are witin a page, a normally pink coloured while
            margin guides are around the edges of the printable page and are normally
            blue in colour.

        ii) what does the gutter in a word processor mean in relatin to column settings?
                                                                            (1mk)

8.   State any three advantage of using microwaves to transmit data.   (3mks)

- Operate at a high speed
- Have a huge transmission capacity
- Are less prone to transmission errors
- Are capable of transmitting both digital and analogue signals

9. Name any three methods that can be used to test a program of errors (3mks)

- Desk checking (Dry- run)
- Using debigging utilities
- Using test data.

10. Give any three characteristics of systems   (3mks)

- Holiste
- Subsystems
- Boundary and environment
- Purpose
- Process
- Syetm estropy
- Inputs and outputs
- Open and closed system
- Control

11. why is a computer referred to as an electronic device   (1mk)

It utilizes electronic signals to process information

12. Why is a mobile phone regards to be a computer   (3mks)

- electronic device
- having inputs / output device
- programmable
- process date at high speed.

13. State any three reason why computers are a much more preferred machine to use in an office and business than other office machines.   (3mks)

- computers process data faster
- computers are more accurate
- computers are more efficient (they utilize minimum resources to process data)

14. State any three factors to consider when preparing a computer laboratory (3mks)

- security of programs and other resources
- reliability of the (source of) power
- the number of computers to be installed and available floor space
- the maximum number of users that the laboratory can accommodate.

15. state any two functions of a UPS   (2mks)

- supply power to computers when power upruptly fails temporarily
- clean power to computers

SECTION B

16.   i) State any two advantage of low level languages.   (2mks)

- no translation
- processor execute them faster
- are stable and hardly crash down once written

ii) Explain in the following terms as used in high level languages.
   Encapsulation   (1mk)
- having data and functions that operate on the data within an object

   Inheritance   (1mk)
- child module based on parent modules takes on all features of the parent module.

iii) give any two examples of fouth generation languages.   (2mks)

visual basic, delphi pascal, visual COBOL,

b) Draw a flow chart that would be used to design a program that would evaluate the value of F using the formula F = 					(5mks)

c) from the flow chart developed in part (b) above write a pseudocode to do the same task as the flow chart 					(4mks)

17.   a) Explain the following computer crime terminologies below

        i) Hacking 						(1mk)
is breaking into a computer system to look at data, copy or modify data to which the person has no authority to access.

        ii) Tapping 						(1mk)
getting access to data while in transmission

        iii) Cracking 						(1mk)
is establishing of week access points in a software by use of guess work or otherwise but normally the cracker has some idea about the system securities.

        iv) piracy 						(1mk)
making copies of copy righted software / data.

v) Fraud

Use of computers to conced information or cheat other users with the intention of making a gain.

iv) Sabotage   (1mk)

the illegal destruction of data and information with the aim of cripping service delivery or causing loss to a firm.

vii) Alteration   (1mk)

changing of data / information without permission with the aim of gaining or misinforming the authorized users.

b) Piracy is the worst computer crime that is scaring software developers out of their wits. Suggest any ways that can be instituted to reduce to reduce piracy   (4mks)

- eract laws that protect developers of software against piracy
- make software cheap enough to increase affordability
- use licenses and certificates to identify originals
- set installation passwords that deter illegal installation of software
- create install once software.

c) State any four measures that can be taken to detect, prevent computer crimes and seal security loopholes.   (4mks)

 -Audit trial

- Data encryption

- log files

- Firewalls.

18.   a) Network software comes in to main categories. Name them   (2mks)

- Network operating system
- Network protocol

b) (i) state any five unique network operating system software functions (5mk)
- Provides access to network resources
-enable nodes to communicate with each other more efficiently
-supports network services like network card drivers and protocols
- Implementation network security feature.

ii) Name any two network operating systems   (2mks)
windows NT, linux , Novell, windows 2000, windows 2003, unix.

d)   Explain the following advantages of networking

i) Shairing of resources   (2mks)

The resources include data / information,files printers, software etc
- Users do not need to not need to transfer data via removable media but sort
  straight saving on cost.
- Centralized access to data / information leads to less time wastage hence
  greeter productivity.

ii) Distributed facilities   (2mks)

- The failure of the central computer does not affect the operations of other
  terminals

- Processing load is shared equally hence no time wastage and high quality
  productivity.

iii) Reliability   (2mks)

- Data can be transferred with minimum error from source to destination

- In use one computer breaks, users can still access data / information from the
  other computers using another computer using another computer on the
  network.

19.   a) Complete the table below that classifies errors that influence the accuracy of data input and information output into / from a computer system   (5mks)

b) Explain what data intergrity is by clearly describing its measures (7mks)

it is the accuracy and completeness of data entered and information received from on information system.

It is measured by:-

1. Accuracy : how close an approximation is to the actual value.
2. tuneliness : deeds with being given at the right time
3. Relevance: refer to entered data being pertinest to the processing needs at hand and meeting the requirements of the process cycle.

c) State any three advantages of files using sequential file organization method

- approach is simple to understand
- Locating a record requires only the record key therefore fast.
- Efficient and economical if the activity rate is high.
- Relatively is expensive input / output media and devices may be used.

20.   a) Ashopkeeper of a small shop at manga has bought a desktop computer to assist him in performing his business activities. He has been advised that before he can use it to work he has to install it with an operatuing system. State any six factors to consider when choosing the operating sytem   (6mks)
1. hardware configurations (memory size, type of processor; speed)

2. Basic design of the computer e.g IBM or IBM compatible or apple

3. applications intended for the computer
4. user friendliness or human computer interface
5. availability is the market
6. lost
7. reliability

b) With reference to disk management explain what is meant by the terms below.

    i)   Formatting   (1mk)

-preparing disks for data storage by creating sectors and tracks on the disk surface.

    ii)   Defragmentation   (1mk)

-the rearrangement of scattered files on a storage media in order to speed up access to files.

    iii)   disk partitioning   (1mk)

-The process of diving a large physical disk into two or more partions / logical drives or volumes.

c) give any two reasons that may make the shopkeeper to partition the computer disk   (2mks)

- in order to install more than one operating system on the same disk.
- In order to be able to make back up on the same disk.

d) The shopkeeper one day switched on the computer and experienced a number of problems with windows operating system that he had installed. The problems included failure to load the operating system during the booting. After several trials of switching on the computer booting, it hang so often alongside abnormal restarting. State any four possible causes for the computer's behaviour. (4mk)

- hardware conflict or incompatibility possibility due to interrupt requests or missing device drivers.
- Possibility of a problem in the installation process
- Problem with hard disk boot sector due to damage or virus attack
- Insufficient memory

- Corrupted system windows registry.