



SECTION A (One mark each)

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

SECTION B (60 MARKS)

21. (a) Analog computers use a continuous signal for its operations whereas a digital computer uses a discrete signal for its operations.

Analog computers represent data using physical quantities while digital computers represent data using binary digits.

Analog computers are slow while digital computers are fast.

(2 marks)

- (b) Characteristics of third generation computers.

- used integrated circuits for processing.
- used semi-conductor memory
- Small size than previous generation
- use of high level programming languages
- improved faster operations and more dependable output.
- They used operating systems
- Introduction of input devices e.g. keyboard and output devices e.g. Monitor
- Used magnetic storage devices.

- (c) (i) Qualities of good information

(3 marks)

- Precise and concise
- Relevant
- Effective
- Feedback
- Should be reliable
- Should be up to date.
- Should be timely i.e. the receiver of the information has enough time to decide appropriate actions.
- Accurate i.e. should be fair and free from bias.
- Cost beneficial i.e. should be analysed for its benefits.
- Authoritative, should come from reliable source.
- Easy to use and understand
- Should be complete i.e. facts and figures should not be missing or cancelled.

(3 mark)

(2 marks)

- (ii) Examples of data
- Numbers e.g. 1, 0 / (0 - 9) or Numerics
 - Letters or (A - Z)
 - Symbols
 - Images
 - Graphs
 - Musical notes

22. (a) (i) **Storage device** is a hardware component that writes and reads data to and from a storage media. (2 marks)

- (ii) Writing data means recording data from memory to a storage medium *while* Reading data means transferring data from storage medium into computers' memory for use by the operating system or application program.

(b) (i) Fetching – Process of obtaining or collecting program instructions from memory into CPU.
OR Is the process of retrieving instructions from main memory into the CPU.

(1 mark)

- (ii) Executing – Process of carrying out commands.
- Process of implementing the instructions.

(1 mark)

- (iii) Decoding – Process of translating instructions in signals that computer can execute.

(1 mark)

(c) (i) **PCI slot**

(1 mark)

Is an interface that allows additional hardware such as network card to be connected.

(ii) **Motherboard**

(1 mark)

- This is a surface used for mounting computer components such as CPU, memory cards, expansion slots.
- Provides interface for connecting peripheral devices.

(iii) **CMOS**

(1 mark)

Stores system set up and configuration
It stores data and time.

23. (a) (i) Text

(1 mark)

(ii) Currency

(1 mark)

(b) How many records do we have in the table above?
Ans. 2

(1 mark)

- (c) (i)
- Consistent and reliable data.
 - Eliminates duplicates
 - Improved data sharing.
 - Data security
 - Vast amount of data can be stored
 - Increased productivity.
 - Data backup
 - Easier accessibility to data
 - Allows concurrency i.e. many people can use the same database at the same time

- Easy updating of data
- Elimination of data redundancy.
- Promotes data integrity.

(ii) = [SALARY]*[NO OF MONTHS] in the form

(3 marks)

(iii) Like * y or like "*y" or *y

(2 marks)

24.

(a)

- (i)
- Computer set
 - Technical support / computer technician
 - Cabling
 - Network devices e.g. router, Hub, switch
 - Computer
 - Software
 - Networking devices
 - Clients
 - Cabling
 - Computer technician

(3 marks)

(ii) - TCP / IP

(b)

- (i) Elements of a good website
- Have feedback / interaction
 - Load very quickly
 - Webpage title
 - Have links which are active
 - Date of last update
 - Navigation buttons
 - Relevant graphics / visual design
 - Information accessibility
 - Content
 - Web friendly to users

(3 marks)

- (ii) Benefits of website
- Communication
 - Advertisement
 - Study purposes (E- learning)
 - E - commerce
 - E - registration
 - E - banking

(2 marks)

25.

(a)

(i)

End note

A feature that allows you to work with word to insert citations and references into your document.

(2 marks)

(ii)

Line spacing

Refers to the space left between lines in a paragraph.

(2 marks)

- (b) (i) **Transition looping** (2 marks)
It allows you to display each slide automatically for a certain amount of time which you can determine.
Display of slides continuously and automatically for a certain period of time.
- (ii) **Slide master** (2 marks)
Refers to the top slide in a hierarchy of slides that stores information about the themes and slide layouts of a presentation.
A slide that can affect all slides in changing.
- (iii) **Slide layout** (2 marks)
This contains formatting positioning and place holder boxes for all the content that appears in a slide.
Arrangement of slide contents on a slide.
Arrangements of objects and text in the slide.
26. (a) **Advantages of GUI over CLI** (3 marks)
- GUI is easier to use compared to CLI interface.
 - Under GUI, one can edit the configurations manually unlike in CLI.
 - GUI has an impressive display compared to CLI display which is dull.
 - GUI is user friendly compared to CLI.
 - GUI is menu driven while the other is command driven.
 - There is no memorizing commands compared to CLI.
 - GUI is easier with multi tasking while CLI is one command at a time.
- (b) (i) **to compress a file** (2 marks)
- Makes it easier to store documents as they take up less space and will be easier to open later as well.
 - Easier transfer of files.
 - To allow faster download and upload.
- (ii) **To back up a file** (2 marks)
Create a copy of data that can be recovered in the event of primary data failure or secure important files from data loss.
- For security purposes incase original is lost.
 - For easy accessibility.
- (c) (i) **Source code** (1 mark)
Instruction which a programmer writes in a high level programming language.
- (ii) **Object code** (1 mark)
Set of instructions that have been converted by a compiler into binary form.
- (iii) **Syntax** (1 mark)
- Rules that define the structure of a language.
 - Rules that control the structure of the symbols, punctuation and words of a programming language.

SECTION C (20 MARKS) Attempt only one question

27. (a) **Indicators of a computer system failure**
- Noisy hard drive'
 - Regular boot errors
 - Poor software performance / software failure
 - Poor hardware performance
 - Loud system fan
 - Hardware conflicts / clashes
 - File and program corruption
 - Slow performance
 - Unexpected visual display
 - Constant freezing
 - Communication failure between devices and operating system.
 - RAM beeps
 - File corruption which may lead to full storage.
 - Over heating
 - Training users
 - Use of compatible software
- (b)
- Use of surge protector to control over and under voltage
 - Connecting uninterruptable power supply to the computer for additional electrical protection.
 - Files should be backed up regularly to prevent data loss caused by system failure.
 - Buying new software.
 - Use of anti-virus
 - Restoring backed up files to their original locations on the computer
 - Backup files should be kept in a fire proof, treat proof safe or offside
 - Updating and upgrading system software.
 - Avoid hibernating computers.

Any 5 x 2 marks

28. (a) **LAN set up**
- Switch
 - Router
 - Hub
 - NIC
 - Ensure that the user has a computer system in place connect the computer to the networking devices through a networking cable.
 - Connect the network cables to several computers.
 - Configure the computers
 - Ensure that the computers can easily communicate with other computers.

(10 marks)

- (b) **Limitations of a computer Network.**
- Security issues i.e. Vulnerability to crimes e.g. hacking
 - High initial costs
 - Moral and cultural effects
 - Spread of terrorism
 - Over reliance on networks

2marks@

- Requires technical support in case of system failure
- Easy spread of computer viruses.
- Complex trouble shooting.

Any 5 X 2 marks

29. (a) - use of test data which subjects the new program to a real work challenge.
- Compilation
 - Debugging utilities
 - Dry-run / test check or walk. (examining of the program before execution)
 - Use of automated test tools.

(6 marks)

- (b) - Portable; Machine independent and able to run on different operating systems.
- Error checking: ability to check errors or bugs and correct them.
 - Affordable: in terms of costs and maintenance.
 - With familiar notation: should have familiar notation so that it can be understood by most programmers.
 - Efficient: ability to implement a command with few lines of code and acquire as a little space in memory as possible.
 - Clear and simple: must be simple to learn and use.
 - User friendliness
 - Compatability
 - Correctness of the programs.

(8 marks)

(c) `#include <stdio.h>` }
`Main ()` } 01 marks
`{`
`Char Surname, First name [20];` } 01 marks
`Print + ("Enter your surname\n");` }
`Scan + (" % s", & surname);` } 01 marks
`Print + ("Enter your First Name\n");` }
`Scan + ("% s", & First name);` } 01 marks
`Print + (Surname is % s\n, surname);` }
`Print + ("First name is % s\n, first name);` } 01 marks
`get ch ();` }
`return O;` } 01 marks

Program code to return surname and given-name on two in VB.

```

Main mode
Sub main ( )
Surname = input ("FRANCIS:")
Given name = input ("KALEMA")
Print ("surname:," FRANCIS)
Print ("given-name:," KALEMA)
End sub ( )
End module.

```

END