



CENTRAL WEST EDUCATION DIVISION
2025 MALAWI SCHOOL CERTIFICATE OF EDUCATION MOCK EXAMINATION

COMPUTER STUDIES

Subject Number: M039/I

PAPER I
MARKING KEY

Section A

1. a. – Local Area Network (LAN)
 - Metropolitan Area Network (MAN)
 - Wide Area Network (WAN)
 - Storage Area Network (SAN)
 - Personal Area Network (PAN)
- b. – Provide access to network resources
 - Enables nodes on the network to communicate efficiently
 - Support inter-process communication
 - Respond to request from application programs running on the network
 - Supporting networks services like network card drivers and protocols
 - implementing network security features
- c. i. - **A**- Hub **B**- Bridge
- ii. - Reduce broadcast storms
 - Allows network segmentation
 - Supports multiple networks
2. a. Higher-level are easy to read and understand but need compilers or interpreters while are closer to hardware and execute faster but are harder to learn.
- b. - Machine languages
 - assembly languages
- c. Simplicity – program should be simple and easy to understand
- Integrity – reliability and accuracy of calculated output
- Efficiency – enhance performance, optimizing execution speed and memory utilization
- Clarity – The program should be well-structured, readable, and maintainable to ensure ease of debugging and future modifications.
- Modularity – The program should be divided into independent, reusable components (functions, procedures, or modules) to enhance maintainability and scalability.



3. a. – Time consuming
- Prone to Human Errors
 - Limited Storage Capacity – Physical records take up a lot of space
 - Difficulty in Data Retrieval
 - Lack of Data Security – Paper-based records can be easily lost, damaged, or accessed by unauthorized persons.
 - Redundancy and Duplication
- b. - Relational Model – Organizes data in structured tables with relationships using keys and follows SQL for data manipulation.
- Hierarchical Model – Represents data in a tree structure with parent-child relationships, where each child has only one parent.
 - Object-Oriented Database Model – Stores data as objects with attributes and methods, supporting inheritance, encapsulation, and polymorphism.
 - Object-Relational Model – Combines relational database features with object-oriented concepts, allowing object storage in relational tables.
 - Entity-Relationship Model – Uses entities, attributes, and relationships to design databases conceptually, often represented in ER diagrams.
 - NoSQL Database Models – Non-relational databases optimized for scalability and handling large, unstructured, or semi-structured data.
- c. - A parent table is the one that has the primary key of the relationship, while a child table is the one that has the foreign key of the relationship. Parent and child tables are related through a common field that links the two tables. Records in a child table relate to one record in a parent table.
4. a. - This process of decomposing fields into separate but related tables
- b. – Computer boot failure
- Overheating issues
- c. - Adobe In Design
- Microsoft Publisher
 - Corel Draw



- d. - Data Entry
 - Data Management
 - Accounting
 - Financial Analysis
 - Financial Modelling
5. a. Logic Error is the type of error whereby the program runs but produces wrong output.
- b. - Physical Layer
 - Data Link
 - Network Layer
 - Transport Layer
 - Session Layer
 - Presentation Layer
 - Application Layer
 - c. (i) - A source program is a program that is not yet translated;
 - Object code is a program that is in machine readable form obtained from a source program by use of a translator and pseudo code.
 - (ii) - A flowchart is a graphical representation of step-by-step processing logic of a program, while pseudo code is a set of structured English like statements that describe the processing steps to be followed to solve a given problem.
6. a. - Compiler
 - interpreter
 - Assembler
- b. - A larger core diameter allows the signal to travel with less resistance and lower attenuation, as it reduces the signal loss over distance. Where as a smaller core diameter increases the resistance to signal flow, leading to higher attenuation, as more energy is dissipated during transmission.



- c. - Scalability – Distributed systems can easily scale by adding more nodes (computers or devices) to the network, allowing them to handle increased workloads or user demands efficiently.
- Fault Tolerance – Because data and processes are spread across multiple machines, distributed systems can continue functioning even if one or more nodes fail, ensuring higher system reliability and availability.
- d. (i) = B2*\$B9
- (ii) = SUM (B2: B5)
- OR = B2 + B3 + B4 + B5

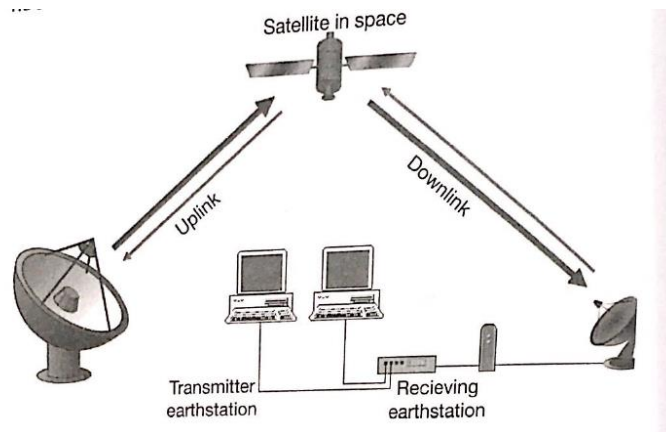
Section B

7. a. 1. Select tool – used to select, move and resize images
2. Text tool - used to draw text frames, insert and manipulate text.
3. Shape tool – for drawing basic shape like rectangle, circle etc.
4. Zoom tool - for magnifying publication view.
5. Rotate tool – for rotating text and graphics
- b. - Cyberbullying and crimes against children
- risk of fraud
 - corrupted language
 - digital divide
 - threat to productivity
8. a. Row numbers [2], Column letters [2], Correct Headings [2], Data Entry [4] = [10]

	A	B	C	D
1	Employee Name	Age	Department	Marital Status
2	Mary Chinkhuti	20	Research	Single
3	Francis Mwakilama	45	Finance	Married
4	Elena Chisale	90	Computer	Married
5	Hellen Fukizi	45	Computer	Single
6	Peter Phiri	34	Research	Married
7				



b.



9. a – Press ctrl+Alt+Delete

- In the Task manager, click process tab
- Select non-responding process
- Click end process

b. – Retrieving data - Queries allow users to retrieve specific data from a database based on certain conditions.

- Manipulating data - Queries are used to insert, update, or delete data in the database.

For example, an INSERT query adds new records, an UPDATE query modifies existing data, and a DELETE query removes data that is no longer needed.

- sorting and filtering data

c. - System configuration

- Reading the instruction manual
- identify the software that meets specific user needs
- Checking hardware requirements.