FIRST TERM E-LEARNING NOTE

SUBJECT: DATA PROCESSING **CLASS: SS 2**

SCHEME OF WORK

WEEK	TOPIC
1	REVISION
2	DATA MODELS I
3	DATA MODELS II
4	DATA MODELING I
5	DATA MODELING II
6	DATA MODELING III
7	NORMAL FORM
8	NORMAL FORM II
9	NORMAL FORMS III
10	ENTITY – REALATIONSHIP MODELS
11	REVISION
12	EXAMINATION

REFERENCE BOOK

- Data processing for Senior Secondary Education by HiiT Plc.

WEEK ONE
TOPIC: REVISION

- **History of computing**

Abacus – Napier's Bones – Slide Rule – Schickard's Calculating Clock – Pascal's calculator – Leibnitz Multiplier – Analytical Engine – Herman Hollerith Punch Card – John Von Neumann Machine

Concepts of Number System: Binary (or Base 2) – Octal (or Base 8) – Decimal (or base 10) – Hexadecimal (or base 16)

- **History of Computer**

First Generation – Vacuum Tube
Second Generation – Transistors
Third Generation – Integrated Circuits
Fourth Generation – Microprocessor
Fifth Generation (Artificial intelligence)

- **Classification of Computer**

Classification Based on Type (Analogue, Digital and Hybrid)
Classification Based on Size (Micro, Mini, Mainframe and Super Computers)
Classification Based on Purpose (General and Special)

- **ICT Application in Everyday Life**

Uses of ICT (Education, Banking, Industry, Commerce)
Impact of ICT on the Society

- Faster Communication Speed
- Lower Communication

- Effective Sharing Information
- Paperless Environment
- Borderless Communication
- Social Problem

REVISON QUESTIONS

1. Identify the Concrete device used in computing.
2. Convert the following decimal to Hexadecimal i. 4D5 ii 5F
3. Convert the following decimal to Octal i. 476 ii 57
4. Convert the following decimal to Binary i. 35.5 ii 37
5. Who invented the Pascal Calculator?
6. What is the name of the first mechanical calculating device?
7. How many generation of computer do we have?
8. List the device or major component that was used building the computer in each generation.
9. Another name for the Fifth generation computer is _____
10. List the classification of computer according to types, size and functionality
11. State five (5) impact of ICT on the society.
12. List the benefits of ICT to the society.
13. List the procedure for information processing.
14. List five advantages and three disadvantages of using computers for information processing.
15. Define information transmission and list the methods of information transmission with five examples each.
16. List three types of information transmission.
17. Define Operating System and give four examples of an operating system.
18. Mention five types of operating system (OS).
19. State four functions of an Operating System.
20. State the steps on how to carry out the following in MS- Word.
    - Load / open an MS-Word application
    - Open both new and existing document
    - Save a document
    - Retrieve an existing document
    - Increase Font size, Change Font style, and Underline
    - Change the case of a text
    - Apply the following font effect; superscript, subscript, strikethrough.
21. Differentiate between Word processing and Word processor.
22. List four examples of word processor and mention four examples of MS Office.
23. List five major methods involved in copying a document in MS-Word.
24. List five features of a typical Word Processor.
25. Define Spreadsheet and state three uses of spreadsheet.
26. List five examples of a spreadsheet package.
27. State the steps on how to carry out the following in MS-Excel
    - To delete cells, rows and columns
    - To insert cells, rows and columns
    - Find data or find and replace data
28. Differentiate between Database and Database Management System.
29. List five examples of a DBMS.
30. Define the following basic terms used in database management system; Character, field, record, database file, key
31. State three uses of database management system.
32. Define Computer ethics and state three Computer room Management Ethics.

33. List three proper ways of using the computer and four ways of misusing computers.
34. State four safety measures for computer users
35. State four safety rules when using the computer lab.

WEEK TWO
TOPIC: DATA MODELS I

- Definition of Data Model
- Concept of Data Modelling

INTRODUCTION TO DATA MODELLING

The main effort during the system development life cycle (SDLC) was to produce a set of programs that automates a business process. Processing was the key drivers for information systems, not the data or information. As the technology and complexity of system grew, methodologies and modelling techniques were invented to improve the quality of the deliverables and to ensure that inexperienced programmers could follow repeatable SDLC processes.

Definition of Data Modelling

Data Modelling is the process of…