

The
Management
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CERTIFICATE UNIVERSITY EXAMINATIONS
SCHOOL OF SCIENCE AND TECHNOLOGY (SST)
CERTIFICATE IN BUSINESS INFORMATION
COMMUNICATION TECHNOLOGY

CBT 104 : BASIC SYSTEM ANALYSIS AND DESIGN

DATE: 30TH JULY 2026

DURATION: 2 HOURS

**MAXIMUM
MARKS: 70**

INSTRUCTIONS:

1. Write your registration number on the answer booklet.
2. **DO NOT** write on this question paper.
3. This paper contains **SIX (6)** questions.
4. Question **ONE** is compulsory.
5. Answer any other **FOUR** questions.
6. Question **ONE** carries **30 MARKS** and the rest carry **10 MARKS** each.
7. **Write all your answers in the Examination answer booklet provided.**

QUESTION ONE

Read the Case Study below carefully and answer the questions that follow:

Delta Holdings Limited is a privately owned enterprise that specializes in providing auction services to private sector organizations across Kenya. The company's main office is located in the Upper Hill area of Nairobi. In addition to its headquarters, Delta Holdings operates several regional branches in Eldoret, Machakos, and Nakuru. Since its establishment over five years ago, Delta Holdings has grown significantly and now employs more than 250 staff members. These employees play a crucial role in ensuring the company delivers top-quality services and maintains smooth operations.

Currently, the company utilizes a manually operated biometric system to record and manage employee information. However, the General Manager has tasked you, in your role as a Systems Analyst and Design Engineer, with developing a modernized system that will digitize and automate the capture of employee biodata.

The new biometric system must include features that allow for the creation of duplicate data files. These files will be stored at a secure data recovery site to serve as backups for future reference. In addition to developing and deploying the system, you are also responsible for training end-users on how to operate the new system effectively. Furthermore, you are expected to provide ongoing maintenance and support services after the implementation to ensure smooth functioning of the system.

Required:

- a) Define the term System Analysis.

(2 Marks)

- b) Explain any three elements of a good system.

(6 Marks)

- c) Define quality assurance and state its objectives

(6 Marks)

(6)

- d) Explain three types of form used in system design and development
(6 Marks)
- e) Elaborate Four objectives of conducting system Audits **(4 Marks)**
- f) Highlight the three levels of information.
(3 Marks)
- g) State any three advantages of interviewing as a method of data gathering.

(3 Marks)

QUESTION TWO

- a) Assess **FOUR** attributes of a good system analyst.
(4 Marks)
- b) Describe the following terms in short notes.
 - i. Open systems and closed systems **(2 Marks)**
 - ii. Bottom up and bottom down strategy designs
(3 Marks)
 - iii. System
(1 Mark)

QUESTION THREE

- a) Describe any FOUR types of feasibility studies conducted during system development.
(4 Marks)
- b) Illustrate three file organization techniques in an institution.
(6 Marks)

QUESTION FOUR

- a) Evaluate any four conversion method that could be used in implementing a new system.
(4 Marks)
- b) Briefly explain three classifications of system maintenance.
(6 Marks)

QUESTION FIVE

Describe FIVE system development Life cycle stages that can be used in coming up with software products.
(10 Marks)

QUESTION SIX

- a) Examine the importance of documentation during system development process.
(8 Marks)
- b) Define the term System design.
(2 Marks)