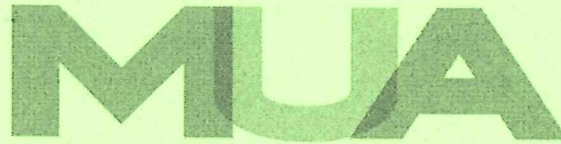


The
Management
University
of Africa



Sponsored by the Kenya Institute of Management

CERTIFICATE UNIVERSITY EXAMINATIONS

SCHOOL OF MANAGEMENT AND LEADERSHIP

**CERTIFICATE IN BUSINESS INFORMATION COMMUNICATION
TECHNOLOGY**

CBT 104: BASIC SYSTEM ANALYSIS AND DESIGN

DATE: 3RD APRIL 2025

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:

A new systems development project is Pete's first experience as a project manager, and he has led his team successfully to the programming phase of the project. The project has not always gone smoothly, and Pete has made a few mistakes, but he is generally pleased with the progress of his team and the quality of the system being developed. Now that programming has begun, Pete has been hoping for a little break in the hectic pace of his workday. Prior to beginning programming, Pete recognized that the time estimates made earlier in the project were too optimistic.

However, he was firmly committed to meeting the project deadline because of his desire for his first project to be a success. In anticipation of this time-pressure problem, Pete arranged with the human resources department to bring in two new college graduates and two college interns to beef up the programming staff. Pete would have liked to find some staff with more experience, but the budget was too tight and he was committed to keeping the project budget under control. Pete made his programming assignments, and work on the programs began about two weeks ago. Now, Pete has started to hear some rumbles from the programming team leaders that may signal trouble. It seems that the programmers have reported several instances where they wrote programs, only to be unable to find them when they went to test them. Also, several programmers have opened programs that they had written, only to find that someone had changed portions of their programs without their knowledge.

Required:

- a) Is the programming phase of a project a time for the project manager to relax? Why or why not? (2 MARKS)
- b) What problems can you identify in this situation? (3 MARKS)
- c) What advice do you have for the project manager? (5 MARKS)
- d) Describe the SDLC process. (10 MARKS)
- e) Define System analysis and design. (2 MARKS)
- f) Suggest any **FOUR** conversion methods that could be used in implementing a new system. (4 MARKS)
- g) Identify **FOUR** system testing stages used in achieving finished software products. (4 MARKS)

QUESTION TWO

- a) State and explain ANY four elements of a good system. (8 MARKS)
- b) Define the Term Information System. (2 MARKS)

QUESTION THREE

- a) Discuss the three levels of information. (4 MARKS)
- b) Elaborate any THREE types of system maintenance in any organization. (6 MARKS)

QUESTION FOUR

- a) Highlight the tools used in Structured analysis for systems analysis and design (5 MARKS)
- b) Define the term file organization (1 MARK)
- c) Examine any TWO types of file organization methods (4 MARKS)

QUESTION FIVE

List and explain the characteristics of an information system (10 MARKS)

QUESTION SIX

- a) Examine any FOUR Objectives of conducting systems audit (4 MARKS)
- b) In system analysis and design models are used widely: Demonstrate the three major models types (6 MARKS)

