

061006T4ICT

ICT TECHNICIAN LEVEL 6

IT/OS/ICT/CR/12/6

Perform System Analysis and Design

Nov/Dec 2024



**TVET CURRICULUM DEVELOPMENT, ASSESSMENT AND CERTIFICATION
COUNCIL (TVET CDACC)**

PRACTICE

Time: 3 HOURS

INSTRUCTIONS TO CANDIDATE:

1. You are required to perform the following tasks
 - i. TASK 1: Draw a flowchart diagram
 - ii. TASK 2: Draw a decision tree
 - iii. TASK 3: Draw Entity Relationship Diagram (ERD)
2. You have been provided with the following resources for the practical tasks:
 - i. A computer installed with system analysis design tools e.g. Microsoft visual, Microsoft office suite
 - ii. Printer

TASK 1: DRAW A FLOWCHART DIAGRAM**(15 marks)**

Jumia has a rewarded system for its loyal customers. If a customer purchases goods with ksh 50,000 or more, and the loyalty card has more than 5000 points, the customer is awarded a voucher worth ksh10,000 or a voucher worth ksh 5000 if the card has less than 5000 points. The transaction is stored in a file and a report generated. Using ms word draw a system flowchart to represent this logic.

TASK 2: DRAW A DECISION TREE**(10 marks)**

During development of Makini Library System, there were many rules documented, that is a procedure for becoming a member of library, rule for issuing books etc. The membership rule stated: “Anyone whose age is 18 or more than that can become a member of library. There are two types of memberships depending upon the duration of membership. First is for 6 months and other is for 1 year. 6 months’ membership fee is KSh 1000 and 1-year membership fee is KSh 1500.” Use Ms Word to draw a decision tree for the membership rule.

TASK 3: DRAW ENTITY RELATION**M (ERD)****(15 marks)**

The details below represent data stored in

about products and customer orders.

i) Admission

Admission number

Gender

First name

Last name

Date of birth

Address

ii) T s

Treatment number

Admission number

Doctor name

Diagnosis

Recommendation

Medication

iii) Discharge details

Discharge number

Admission number

Medicine bill

admission bill

other bills

- i. Identify the primary keys and foreign keys
- ii. Identify the relationships between the tables
- iii. Using Ms Access draw a fully attributed ER-diagram(screen capture the relationship and print)