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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)

easytvet.com

PRACTICAL ASSESSMENT

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 RELATIONSHIP DIAGRAM (ERD) (15 marks)

The details below represent data stored in a retail shop about products and customer orders.

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i) Admission	ii) Treatment details	iii) Discharge details
Admission number	Treatment number	Discharge number
Gender	Admission number	Admission number
First name	Doctor name	Medicine bill
Last name	Diagnosis	admission bill
Date of birth	Recommendation	other bills
Address	Medication	

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)