ADVANCED CERTIFICATE IN COMPUTER STUDIES

TQF 5 EXAMINATIONS

FINAL INTEGRATED SUMMATIVE EXAMINATION

SITTING: NOVEMBER/DECEMBER 2016

SUBJECT: SYSTEM ANALYSIS AND DESIGN I

TIME: 3 HOURS

TOTAL MARKS: 100
PASS MARK: 50

INSTRUCTIONS

1. Write your examination number and national registration card number on the answer booklet.

2. There are seven (7) questions in this booklet.

3. You are required to attempt any five (5) questions.

4. All questions carry equal marks.

5. Cellphones and programmable calculators are not allowed in the examination room.

6. No candidate is allowed to leave the examination room one (1) hour after the start of the examination and thirty (30) minutes before the end of the examination.

DO NOT TURN THIS PAGE UNTIL YOU ARE TOLD TO DO SO

QUESTION ONE

Systems analysis and design (SAD) refers to the process of establishing a business situation with the intent of improving it through better procedures and methods. Explain in detail the following terms as used in SAD.

a)	Closed system
b)	Data dictionary
c)	Data flow diagram
d)	Entropy
e)	Feedback
f)	Information system
g)	Interdependence
h)	Subsystem
i)	System
j)	System boundary

[2 marks each]

[Total: 20 Marks]

QUESTION TWO

a) Define a project. [2 marks]

b) Describe 3 tests that information system projects must pass to be deemed feasible? [6 marks]

c) Name 5 sources of project requests [5 marks]

d) Which THREE of the following may be represented on data flow diagrams?
- entities
- decisions
- variables
- data structures
- data stores
- processes

[3 marks]

e) Name and describe any two (2) data flow analysis tools. [4 marks]

[Total: 20 marks]

QUESTION THREE

a) Name three (3) tools that system's analysts can use to document procedures. [3 marks]

b) The unit price of a particular product is K15 if less than 10 are purchased, K14 if between 10 and 49 are purchased, and K13.80 if 50 or more are purchased. If the customer also has preferred customer status then the purchase is subject to a discount of 10%. Construct a decision table for this information.

[17 marks]

[Total: 20 marks]

QUESTION FOUR

a) In documenting the decision of how to process procedures, systems analysts must identify the permissible conditions that can occur as well as specific actions that can occur. Define the terms condition and action [2 marks]

b) A company gives discounts depending on the purchased merchandise and the size of the order. The company will give a discount if the customer makes payment within 10 days otherwise the customer pays full invoice amount. If greater than K100,000 goods are bought, a 3% discount is given, between K50,000 and K100,000 are bought, a 2% discount is given, below K5,000 no discount is given and full invoice amount is paid. Construct a decision tree for this information.

[18 marks]

[Total: 20 marks]

QUESTION FIVE ✓

As a new systems analyst at Premier Financial Services, you are getting quite an education. You report to the IT manager, who also chairs the systems review committee. Several months ago, the committee rejected a request from Jack, who heads the finance department. The request was for an expensive new accounts payable system, which was rejected because the benefits did not appear to outweigh the costs. This request was made because of developments outside the organisation.

a) Identify and explain the type of feasibility that Jack's rejected proposal did not meet? [3 marks]

b) At what stage of the systems development lifecycle is feasibility study carried out? [1 mark]

c) Name and explain one other type of feasibility study. [3 marks]

d) List and explain two sources of any project proposal and in what circumstances the sources can make that request. [3 marks]

e) Describe four reasons for initiating any information systems projects. [4 marks]

f) Identify the two sources of the project requests in the passage above. [6 marks]

(Total: 20 marks)

QUESTION SIX

a) Explain the roles of the systems analyst. [6 marks]

b) Describe four (4) skills of the system analyst. [8 marks]

c) Discuss three types of decision table entries. [6 marks]

(Total: 20 marks)

QUESTION SEVEN

a) Define a Standard [2 marks]

b) Explain four (4) benefits of standards in systems analysis and design . [8 marks]

c) Discuss the concepts of control in systems analysis and design. [5 marks]

d) Mention five (5) objectives of controls. [5 marks]

(Total: 20 marks)

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