

TEVETA

ADVANCED CERTIFICATE IN COMPUTER STUDIES

LEVEL 5 EXAMINATIONS

FINAL INTEGRATED SUMMATIVE EXAMINATION

NOVEMBER/DECEMBER 2019

SUBJECT: SYSTEM ANALYSIS AND DESIGN I

TIME ALLOWED: 3 HOURS

TOTAL MARKS: 100

PASS MARK: 50

INSTRUCTIONS TO CANDIDATES:

1. Write the examination number and the National Registration Card Number on the answer booklet provided.

2. There are Seven (7) questions in this paper.

3. Attempt any five (5) questions of your choice.

4. Cell phones and programmable calculators are not allowed in the examination room.

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

Disadvantages

2

=> increase development cost
=> increase the documentation
=> the ~~system~~ performance can only be determined after the system is fully coded.

QUESTION 1

- (a) Explain five (5) advantages of using the SDLC
(b) Explain five (5) disadvantages of using the SDLC

=> increase development duration (10 Marks)

(10 Marks)

[Total: 20 Marks]

QUESTION 2

- (a) Draw a simple EAR model concerning customers making orders for products by stating what each element represents in the diagram or examples of it. (10 Marks)
(b) Explain five (5) tasks the system analyst can carry out. (10 Marks)

[Total: 20 Marks]

QUESTION 3

- (a) There are four (4) symbols used in a DFD and should not be confused with a flow chart symbols.

Draw and explain these symbols.

(8 Marks)

- (b) Methods of finding out about the current system include:-

- i) Interviews (3 marks)
- ii) Questionnaires (3 marks)
- iii) Observation (3 marks)
- iv) Sampling (3 marks)

explain each method.

[Total: 20 Marks]

QUESTION 4

- (a) Describe five (5) stages involved in a standard control process. (10 Marks)
(b) Explain the difference between operating information and management information (10 Marks)

Data Flow

Process

Source / Destination

Data store

[Total: 20 Marks]

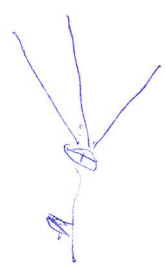
Advantages! => enhance and improve development speed.

=> provides a framework for a standard set of activities
=> helps ensure to keep of the development
=> provide a well detailed steps

QUESTION 5

One of the projects in your company has embarked on is to construct a mini hydro power plant. The table below shows the work activities necessary to achieve this objective.

Activity	Description	Preceding Activity	(Weeks) Duration
A	Design plant	-	12
B	Select site	A	8
C	Select vendor	A	4
D	Select personnel	A	3
E	Prepare site	B	12
F	Requisition of generator	C	18
G	Prepare operations manuals	C	5
H	Install generator	E, f	4
I	Train operators	D, G	9
J	Obtain licence	H, I	6



- (a) Draw a network diagram that will identify all the possible paths with the durations for each path (8 marks)
- (b) Identify the critical path in (a) above. (6 Marks)
- (c) Explain the three constraints of project management. (6 Marks)

[Total: 20 Marks]

QUESTION 6

- (a) Collecting data into a form that is ready for input to a computer system can be done in many ways.

Explain five (5) different data input methods for the system. (10 Marks)

- (b) Explain five (5) reasons why decision trees provide an effective method of decision making. (10 Marks)

[Total: 20 Marks]

Organisation
Interdependence
Integration
Interaction
Central c

QUESTION 7

A system can be defined as "anything formed of parts placed together or adjusted into a regular and connected whole".

(a) Explain five (5) properties and objectives that you would consider when forming a system. (10 Marks)

(b) Explain the following terms

(i) Quality control (5 Marks)

(ii) Change control (5 Marks)

[Total: 20 Marks]