NESA NATIONAL EXAMINATION AND SCHOOL INSPECTION AUTHORITY

SOD – System Analysis and Design

T171

Friday, 23/7/2021

08:30 – 11:30 AM

Names: .....

Index number : .....

TVET NATIONAL EXAMINATIONS, RTQF LEVEL 5, 2020-2021

QUESTIONS and ANSWERS BOOKLET

OPTION/ TRADE : **SOFTWARE DEVELOPMENT**

SUBJECT : **SYSTEM ANALYSIS AND DESIGN**

ACADEMIC YEAR: **2020-2021**

Read carefully the instructions on page (i) & (ii).

FOR EXAMINER'S USE ONLY

QUESTIONS	1	2	3	4	5	6	7	8	9	10	Total
Marks											

QUESTIONS	11	12	13	14	15	16	17	18	19	20	Total
Marks											

QUESTIONS	21	22	23	24	25	26	27	28	29	30	Total
Marks											

TVET NATIONAL EXAMINATION, RTQF LEVEL 5, 2020-2021

INSTRUCTIONS TO CANDIDATES: PART I (Answer Booklet)

1. A candidate should fill in the actual names and the index number on the cover of this questions and answer booklet on the provided place (Black Box).

2. It is illegal for a candidate to write any of his/her names, index number or a school name inside the answer booklet.

3. A candidate should check if all pages of the answer booklet are complete. No candidate should remove or tear any pages or part of it from the answer booklet.

4. A candidate should answer in the language in which the examination is set. (See page ***(ii)***)

5. A candidate should sign on the sitting plan when submitting the answer booklet. He/she has also to check if the answer booklet is well sealed.

6. No extra paper is allowed in the examinations room. If a candidate is caught with it his/her results will be nullified.

7. No candidate is allowed to write answers not related to the subject being sat for, otherwise it will be considered as a cheating case.

8. Write your answers on the 12 lined pages (From page 1 of 12 to page 12 of 12).

9. Use the last non-lined pages as draft.

10. Results for any candidate who is caught in examination malpractices are nullified. The cheating can be recognized during examinations administration, marking exercise or even thereafter.

TVET NATIONAL EXAMINATION, RTQF LEVEL 5, 2020-2021

OPTION/TRADE: SOFTWARE DEVELOPMENT

SUBJECT: System Analysis and Design

DURATION: 3 hours

INSTRUCTIONS TO CANDIDATES: PART II (Question paper)

The paper is composed of two (2) Sections as follows:

Section I: Attempt all the Twelve (12) questions	**(60 marks)**
Section II: Attempt any Four (4) questions out of Six (6)	**(40 marks)**

Allowed materials:

- Ruler or square
- Calculator

Note:

Every candidate is required to carefully comply with the provided assessment instructions.

Section I : Attempt all the Twelve (12) questions **(60 marks)**

01. Answer by TRUE or FALSE: **(5 marks)**

a. A collection of components that work together to realize some objectives forms a system.

b. System life cycle is not an organizational process of developing and maintaining a system.

c. In the system analysis and design terminology the system development life cycle means software development life cycle.

d. Coding is not a step-in system development life cycle.

e. System analysis and system design are the same phase of system development life cycle.

02. Define a system. State any four (4) components of a computer system. **(5 marks)**

03. Differentiate system analysis from system design. **(5 marks)**

04. What is the difference between logical design and physical design? **(5 marks)**

05. Explain any five (5) types of feasibility study. **(5 marks)**

06. List 5 models of the new system. **(5 marks)**

07. Differentiate Front-office information systems from back-office information systems by giving also examples. **(5 marks)**

08. Explain SDLC and give its benefits. **(5 marks)**

09. a) What do you understand by system analyst? **(1 mark)**

b) Mention skills needed for successful system analyst. **(4 marks)**

10. a) To provide a better understanding of input, output, and processing, these are concepts as defined. March the concepts with its definition.

(3 marks)

Concepts	Definition
1.Input	A. The visual, auditory, or tactile perceptions provided by the computer after processing the provided information.
2.Processing	B. A device used by a computer to communicate information in a usable form.
3.Output	C. The information entered into a computer system, examples include: typed text, mouse clicks, etc.
4.Input Device	D. The process of transforming input information into and output.
5.Processing Device	E. Any device that enters information into a computer from an external source.
6.Output Device	F. The electronics that process or transform information provided as an input to a computer to an output

b) What are Types of DFD? **(2 marks)**

11. Why are system tests necessary? **(5 marks)**

12. Choose the best answer: **(5 marks)**

A. It is necessary to consult the following while drawing up requirement specification

a. Only top managers

b. Only top and middle management

c. Only top, middle and operational managers

d. Top, middle and operational managers and also all who will use the system

B. In order to understand the working of an organization for which a computer Based system is being designed, an analyst must

a. Look at only current work and document flow in the organization

b. Discuss with top level and middle level management only

c. Interview top, middle, line managers and also clerks who will enter data and use the system

d. Only clerical and middle level staff who have long experience in the organization and will be users of the system

C. The main objective of feasibility study is

a. To assess whether it is possible to meet the requirements specifications

b. To assess if it is possible to meet the requirements specified subject to constraints of budget, human resource and hardware.

c. To assist the management in implementing the desired system

d. To remove bottlenecks in implementing the desired system

D. The first step in the systems development life cycle (SDLC) is:

a. Analysis.

b. Design.

c. Problem/Opportunity Identification.

d. Development and Documentation.

E. The final step in the System development life cycle (SDLC)?

a. Analysis

b. Operational

c. Development

d. Design

Section II: Attempt any Four (4) questions out of Six (6). **(40 marks)**

13. Describe the two categories of a system. Give three (3) examples for each category. **(10 marks)**

14. a) Explain the term Changeover in system analysis and design. **(4 marks)**

b) Describe the strategies that are followed for changeover of the system. **(6 marks)**

15. Give the definition and example of the following types of Information System (IS). **(10 marks)**

a. Expert systems

b. Office automation IS

c. Transaction processing IS

d. Management IS

e. Decision support systems

16. What is waterfall model? Graphically show the phases of waterfall model and then explain them briefly. **(10 marks)**

17. State and explain four (4) features and characteristics of a system. **(10 marks)**

18. a) What does the term Automated system mean?

b) Describe briefly why it is of benefit to automate an information system.

c) Define what is an automated system? Explain its components. **(10 marks)**