TEVETA

Technical Education Vocational and Entrepreneurship Training Authority

DIPLOMA IN COMPUTER STUDIES

LEVEL 6 EXAMINATIONS

FINAL INTEGRATED SUMMATIVE EXAMINATIONS

SITTING: APRIL 2022

SUBJECT: SYSTEM ANALYSIS AND DESIGN II

TIME: THREE (3) HOURS **TOTAL MARKS: 100**

PASS MARK: 50

INSTRUCTIONS

1. Write your examination number and National Registration Card number on the answer Booklet provided. Ensure to append your signature in the space provided on the answer booklet.
2. Write your answer SCRIPT SERIAL NUMBER on the examination register provided and the entry slip.
3. There are SEVEN (7) questions in this paper.
4. Attempt any FIVE (5) questions of your own choice.
5. Each question carries twenty (20).
6. Cell phones and programmable calculators are NOT allowed in the examination room.

DO NOT TURN THIS PAPER UNTIL YOU ARE TOLD TO DO

QUESTION 1

a) Explain the common methods that are used when estimating system development time. (9 marks)

b) Method can be defined as a systematic and orderly procedure or process for attaining some objective. Structured methodology divides the systems life cycle into stages. Describe the characteristics of structured methods. (5 marks)

c) Describe the most important techniques used in Structured Systems Analysis and Design Method (SSADM) (6 marks)

[Total: 20 marks]

QUESTION 2

a) Training of both operators and users can be done through different methods. Describe the methods citing their merits only. (9 marks)

b) During system's review we use event logging and attitude survey to evaluate the system. Explain concisely these methods. (6 marks)

c) Explain the following terminologies:

i) Implementation, (2 marks)

ii) Evaluation (1 marks)

iii) Maintenance (2 marks)

[Total: 20 marks]

QUESTION 3

a) You are the **Systems Analyst** at the Ministry Of General Education. You need to install a new system throughout the country. The senior managers at the ministry have utmost trust in the new system.

i) State the changeover method or methods that can be used. (4 marks)

ii) State two (2) disadvantages and one (1) advantage of the identified method or methods. (6 marks)

b) Describe the three (3) types of data that do not need to be entered into a system. (6 marks)

c) Explain the distinction between validation and verification (4 marks)

[TOTAL: 20 MARKS]

QUESTION 4

a) State two advantages of a Light Emitting Diode (LED) screen over a Cathode Ray Tube (CRT). (4 marks)

b) The significance of the use of graphic format to present information to management cannot be over emphasized. Concisely explain three (3) reasons why graphics are used. (6 marks)

c) For a systems analyst to learn a great deal about what the output of a newly designed system must be, they need to properly and fully answer some questions. Explain those questions. (10 marks)

[Total: 20 marks]

QUESTION 5

a) State the various important factors that one should consider prior to system selection. (6 marks)

b) To select both software and hardware is a vigorous exercise. Describe the steps involved in the selection process. (10 marks)

c) Describe the following criteria used in software selection:

i) Reliability (2 marks)

ii) Security (2 marks)

[Total: 20 marks]

QUESTION 6

a) A code is said to be a brief number, title, or symbol used instead of more lengthy or ambiguous descriptions. Explain the aims of coding. (6 marks)

b) Describe concisely five (5) coding methods giving an example of each. (10 marks)

c) Explain transaction validation (4 marks)

[Total: 20 marks]

QUESTION 7

a) There are three levels of quality assurance that an analyst uses which are testing, verification with validation and certification. Describe these levels. (8 marks)

b) Distinguish between the following terms

i) White box testing and black box testing (4 marks)

ii) Static testing and dynamic testing (4 marks)

iii) Integration testing and system testing (4 marks)

[Total: 20 marks]