THE UNITED REPUBLIC OF TANZANIA
NATIONAL EXAMINATIONS COUNCIL
DIPLOMA IN SECONDARY EDUCATION EXAMINATION

738 INFORMATION AND COMMUNICATION TECHNOLOGY

Time: 3 Hours **Friday, 10th May 2013 p.m.**

Instructions

1. This paper consists of sections A, B and C.
2. Answer **all** questions in section A and **two (2)** questions from each of the sections B and C.
3. Read each question carefully before you start answering it.
4. Calculators are **not** allowed in the examination room.
5. Cellular phones are **not** allowed in the examination room.
6. Write your **Examination Number** on every page of your answer booklet(s).

SECTION A (30 Marks)

Answer **all** questions in this section.

1. Give three differences between linear and non-linear multimedia.

2. Elaborate briefly the following concepts as used in database management system
   (a) Input design (b) Output design (c) File and data design

3. Briefly describe any four functions of an operating system in relation to hardware.

4. Match the storage devices in **Column A** with corresponding descriptions in **Column B**

Column A	Column B
(i) CD ROM	(a) Information can be added once only after that information stored cannot be added or changed.
(ii) Digital Audio Tape	(b) Data on the disk can be erased and replaced with other data.
(iii) CD- R	(c) Can only read the information stored but cannot add more information or change already existing information.
(iv) DVD	(d) Allows sequential access of information i.e. first saved first accessed.
(v) CD- RW	(e) Flexible disks made from plastic materials enclosed inside a protective jacket.
(vi) Hard Disks	(f) Information is stored in two layers of each surface; hence more capacity to store data than a normal CD.
(vii) Magnetic Striped Cards	(g) Contains many tracks in form of concentric circles, one inside the other.
(viii) Floppy Disks	(h) Storage devices made up of plastic materials coated with a strip of magnetic oxide.
	(i) Made from metals and are coated with a thin film of magnetic oxide normally used in portable computers.

5. (a) Define the term "Table of Specification."

   (b) Outline the stages necessary in constructing a Table of Specification.

6. Elaborate the application of the following attributes of spreadsheet programs.
   (a) Number tab (b) Border and pattern tab (c) Alignment tab

7. (a) Explain the term control structures as used in computer programming.

   (b) Giving examples elaborate how selection and iteration (looping) control structures are used during computer programming.

8. Briefly explain four factors to consider in setting up a computer laboratory.

9. (a) What is a pseudocode?

   (b) Write a pseudocode program that can be used to classify people according to income. If the person's income is less or equal to 15,000,000 per year, output "middle class" otherwise the program should display "upper class."

10. Briefly explain the functions of each component of a Central Processing Unit (CPU).

SECTION B (30 Marks)

Answer **two (2)** questions from this section.

11. Trace the development of computer programming language generations in the order of their evolution.

12. Examine five limitations of the print media as one of the instructional media in preparing E-learning materials.

13. Evaluate five benefits of installing a computer network in an organization.

14. Analyse at least five features of word processing software giving examples of how useful they are to the user.

SECTION C (40 Marks)

Answer **two (2)** questions from this section.

15. Describe in detail the use of five tools that a teacher needs in planning for teaching and learning at the beginning of a new academic year.

16. Choose any five assessment strategies and describe how they can be used in the assessment process.

17. Elaborate five psychological benefits of using audio-visual materials in teaching ICS.

18. Describe three benefits of subjective type of items and two benefits of objective type of items in the assessment of ICS.