

2920/101

**INTRODUCTION TO INFORMATION COMMUNICATION
TECHNOLOGY AND ETHICS**

November 2016

Time: 3 hours



THE KENYA NATIONAL EXAMINATIONS COUNCIL

DIPLOMA IN INFORMATION COMMUNICATION TECHNOLOGY

MODULE I

**INTRODUCTION TO INFORMATION COMMUNICATION
TECHNOLOGY AND ETHICS**

3 hours

INSTRUCTIONS TO CANDIDATES

This paper consists of EIGHT questions.

Answer any FIVE of the EIGHT questions in the answer booklet provided. ✓

ALL questions carry equal marks.

Candidates should answer the questions in English. ✓

**This paper consists of 4 printed pages.
Candidates should check the question paper to ascertain that all the
pages are printed as indicated and that no questions are missing.**

1. (a) Outline **four** characteristics of *third generation computers*. (4 marks)
- (b) Explain **two** methods that could be used to manage stress among ICT students in a college. (4 marks)
- (c) (i) Explain **two** benefits of installing a UPS in a company's computer system. (4 marks)
- (ii) Explain **one** function of a bus system in a computer. (2 marks)
- (d) A programmer developed a program using an *assembly language*.
- (i) Describe **two** characteristics that this program should exhibit. (4 marks)
- (ii) Explain one challenge that the programmer is likely to face during this program development. (2 marks)
2. (a) Outline **four** roles of a *system designers* in system development. (4 marks)
- (b) Distinguish between *tailor made* and *off-the-shelf* software acquisition methods. (4 marks)
- (c) Tom is using a computer whose screen is flickering and it is positioned above his eye level. Explain **two** problems that he is likely to suffer from as he continues using this computer. (4 marks)
- (d) Figure 1 and Figure 2 show computer system devices. Use them to answer the questions that follow:



Figure 1

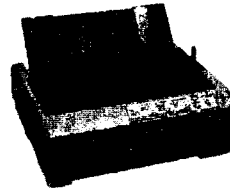


Figure 2

- (i) Identify each of the devices. (2 marks)
- (ii) Outline **three** disadvantages of each of the devices identified in (i). (6 marks)
3. (a) (i) Outline **two** advantages of using an *ergonomic chair* while working on the computer. (2 marks)
- (ii) A student at Mazuri Technical is undertaking an ICT project that needs to be completed within the term besides the normal learning schedule. Explain **two** time management skills that would help in coping with this situation. (4 marks)
- (b) Distinguish between *self-esteem* and *self-awareness* as used in life skills. (4 marks)
- (c) Explain **two** negative impacts of ICT to the society. (4 marks)
- (d) (i) Advancement in ICT has led to introduction of *distance learning* in institutions. Outline **two** benefits a student will accrue from this mode of learning. (2 marks)
- (ii) Explain **two** circumstances under which *social media platform* could be of importance to a student in a college. (4 marks)

- 4.
- (a) (i) Outline **three** factors to consider when acquiring software for an organisation. (3 marks)
- (ii) A technician was performing some repairs in an office when he accidentally cut a data cable and all computers failed to access the network resources. State **two** types of computer topology that could have been installed in this office. (2 marks)
- (b) With the aid of a diagram in each case, describe the following networks:
- (i) peer-to-peer;
- (ii) client-server. (6 marks)
- (c) A company realised that unauthorised users accessed data in their system. Explain **three** approaches that would be used to prevent this anomaly. (6 marks)
- (d) A school has been buying its computer hardware from dealers but has opted to lease the hardware instead. Outline **three** benefits they could gain from this option. (3 marks)
- 5.
- (a) (i) Outline **two unethical behaviours** associated with the use of ICT. (2 marks)
- (i) State **two** examples of each of the following application software:
- I. desktop publishing;
- II. presentation. (4 marks)
- (b) Differentiate between a *super computer* and *mainframe computer*. (4 marks)
- (c) Explain **two** benefits of computer networks in a learning institution. (4 marks)
- (d) Hillary installed an operating system in his laptop computer. Explain **three** functions of this software. (6 marks)
- 6.
- (a) (i) State **four** uses of ICT in banking.
 → To keep information about customers
 → To record all transactions
 → To do calculation
 → To communicate by manager and cashier (2 marks)
- (ii) Students of Maweni Technical intend to roll out basic computer training program to the neighbouring community. Outline **two** benefits the institution would accrue from this. (4 marks)
- (b) Differentiate between *smoothing* and *bargaining* as used in conflict management. (4 marks)
- (c) Patrick intends to buy a digital *scanner* for his business.
- (i) Explain **one** use of this device. (2 marks)
- (ii) State **two** types of scanners that he could choose from. (2 marks)
- (d) Peris, an ICT expert, developed a computer payroll software. Explain **three** benefits that she could get by copyrighting this software. (6 marks)

8

- (a) Explain **two** functions of the *control unit* of a computer system. (4 marks)
- (b) ABC Company Limited has organised training on conflict management for its employees. Explain **three** important objectives of such training. (6 marks)
- (c) Differentiate between a *magnetic strip reader* and a *chip reader* input devices. (4 marks)
- (d) An organisation intends to train its employees on the importance of ICT ethics. Explain **three** topics that could be included in this training. (6 marks)
8. (a) (i) Outline **two** *workplace conflicts* which could occur in the ICT department of an organisation. (2 marks)
- (ii) The manager of Maendeleo Company Limited has developed a life skill programme for the staff. Outline **two** skills that the staff would gain from this program. (2 marks)
- (b) Explain **one** circumstance under which each of the following type of computer is most appropriate:
- (i) special purpose; (2 marks)
- (ii) micro computer. (2 marks)
- (c) Brighters Company Limited is in the process of developing an ICT policy for its Information system. Describe **three** issues that would be necessary to be included in this policy. (6 marks)
- (d) Goldie IT Company intends to reach out to the society as part of their Corporate Social Responsibility. Explain **three** challenges that the company is likely to encounter. (6 marks)

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