

2920/101

INTRODUCTION TO INFORMATION COMMUNICATION  
TECHNOLOGY AND ETHICS

July 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**

*Answer any FIVE of the following 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) Differentiate between *supercomputers* and *mainframe* computers. (4 marks)
- (b) Figure 1 shows signs for computer ports. Outline the functions of the signs labelled (i) and (ii). (4 marks)

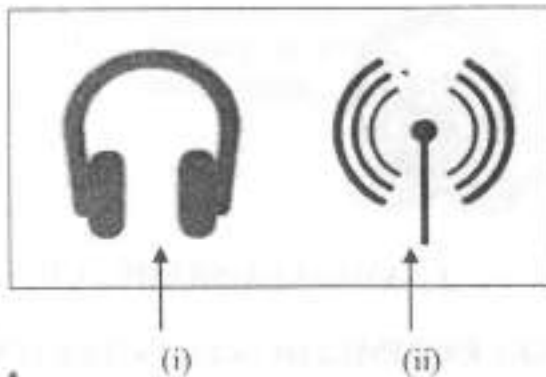


Figure 1

- (c) ICT is pivotal to the success of devolution in Kenya. Explain **three** benefits that could be realized with its adoption in county governments. (6 marks)
- (d) Wireless Internet is prone to unauthorized user access. Explain **three** measures that could be used to mitigate this problem. (6 marks)
2. (a) (i) Outline **three** types of computer buses. (3 marks)
- (ii) Distinguish between *north* and *south* bridges as used in computer's chipset. (4 marks)
- (b) Explain **three** advantages of telecommuting. (6 marks)
- (c) (i) Outline **three** circumstances that could lead to failure of social responsibility programmes in organizations. (3 marks)
- (ii) Computers cannot work without operating systems. Outline **four** functions of the software to justify this statement. (4 marks)
3. (a) Outline **four** categories of computer keyboard keys. (4 marks)
- (b) (i) Irene was required to identify challenges that affect integration of computer ergonomics in an organization. Outline **four** typical challenges that she could have identified. (4 marks)
- (ii) Data security should be an important area of concern for every small-business owner. Outline **four** data safety measures that can be adopted. (4 marks)
- (c) (i) Paul is required to install a computer network for his company. Explain **two** goals that he should strive to achieve in the installation. (4 marks)
- (ii) Explain **two** circumstances that could lead to adaption of a ring topology in computer networking. (4 marks)
4. (a) (i) List **four** technologies for random access memory (RAM). (2 marks)
- (ii) Differentiate between *competing* and *collaborating* conflict management techniques. (4 marks)

- (b) Outline **four** safety precautions that should be adhered to when charging a laptop computer. (4 marks)
- (c) Steve was required to select an application software for a client. Explain **two** factors that he should consider, other than cost. (4 marks)
- (d) (i) Logical data safety techniques are increasingly adopted in organizations. Outline **three** examples of such logical safety techniques. (3 marks)
- (ii) Green computing is gaining popularity in developing countries. Outline **three** challenges in its adoption. (3 marks)
5. (a) Explain each of the following terms as used in computers:
- (i) data; (2 marks)
- (ii) node. (2 marks)
- (b) Jane was receiving spam emails in her mail box. Outline **four** precautionary measures that she could put in place to handle the problem. (4 marks)
- (c) (i) Outline **two** advantages of using minicomputers. (2 marks)
- (ii) Distinguish between *requirements* and *qualifications* as applied in recruitments. (4 marks)
- (d) (i) Define the term *discount* as used in computer acquisition. (2 marks)
- (ii) A lecturer described verbal communication in an ICT class. Explain **two** types of verbal communication that he could have described. (4 marks)
6. (a) Describe each of the following data processing methods:
- (i) batch; (2 marks)
- (ii) real-time. (2 marks)
- (b) Differentiate between systems user and systems analyst. (4 marks)
- (c) With the aid of a diagram, describe the components of a computer's central processing unit. (4 marks)
- (d) (i) Philip, a human resource consultant prepared a presentation on staff motivation. Outline **four** negative impacts of unmotivated staff to an organization that he could have mentioned. (4 marks)
- (ii) Sam was required to identify application software in his friend's computer. Outline **four** types of this software that he could have identified. (4 marks)
7. (a) Explain **two** methods of acquiring software license. (4 marks)
- (b) For each of the following scenarios, propose the most appropriate type of computer network:
- (i) to connect computers in a single room or a building; (1 mark)
- (ii) to connect computers within a town; (1 mark)

- (iii) to connect computers around the world; (1 mark)
- (iv) to enable internet services within a private network. (1 mark)
- (c) Tessie intends to formulate wireless policy for her company. Outline **four** rules that she was likely to consider. (4 marks)
- (d) (i) Desktop computers come with several sizes of CPU casing. Outline **four** types of such casings. (4 marks)
- (ii) Beth was required to give a lecture on ICT opportunities to a youth's group. Explain **two** communication skills that could apply during the talk. (4 marks)
8. (a) Outline **three** precautions when handling re-writable Compact Disks. (3 marks)
- (b) Explain **three** benefits of embracing good ICT ethics in organizations. (6 marks)
- (c) (i) Outline **two** measures that could be used to mitigate stress at a workplace. (2 marks)
- (ii) Magnetic disks are popular computer storage medium. Outline **three** of its advantages that influence this trend. (3 marks)
- (d) Bernard intends to install software on a number of computers in his company. Describe **three** methods of installation that he could apply. (6 marks)

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