

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)

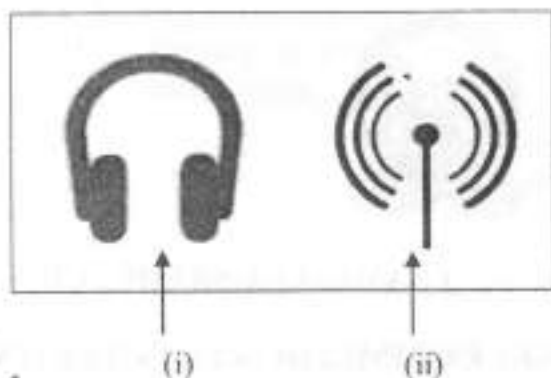


Figure 1

- (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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