

2920/101
INTRODUCTION TO ICT AND ETHICS
July 2018
Time: 3 hours



THE KENYA NATIONAL EXAMINATIONS COUNCIL
DIPLOMA IN INFORMATION AND COMMUNICATION TECHNOLOGY
MODULE I
INTRODUCTION TO ICT AND ETHICS
3 hours

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** limitations of *touch screen* as an output device. (4 marks)
- (b) Describe each of the following ethical issues in regard to computer technology:
- (i) patent rights;
- (ii) trademark. (4 marks)
- (c) Computer technology has had positive impact to the society with respect to how people communicate. Explain **three** such impacts. (6 marks)
- (d) Explain **three** ways in which one would improve low personal self esteem at the place of work. (6 marks)
2. (a) Outline **four** examples of negative impact that each of the following *information* accessed through the use of ICT would have on the society:
- (i) pornography;
- (ii) slander. (8 marks)
- (b) Describe how each of the following are used to threaten the privacy of personal data through computer technology:
- (i) cookies;
- (ii) electronic profile;
- (iii) spyware; (6 marks)
- (c) Biometric devices have been used to ~~control~~ access to highly secured data control rooms. Explain **three** ways in which this ~~has~~ been achieved. (6 marks)
3. (a) Outline **two** differences ~~between~~ a *worm* and a *virus* as used in computer security. (4 marks)
- (b) The following issues relate to the use of ICT in Kenya:
- using the office computer to do personal work;
 - selling pirated software to a non-governmental organization;
 - withdrawing cash from your parents bank account using ATM card without their consent;
 - plagiarizing and using materials from the Internet for your class assignment without giving credit to the original author;
 - sharing offensive messages about a particular community on twitter account;
 - hacking into your school's database to change your examination results;
 - reading a government officer's e-mail without his or her permission;
 - posting a mock examination paper to your Facebook account before it is officially released to candidates;
- Classify each of these issues as either *ethical* or *legal*. (4 marks)

- (c) A national examination system requires the use of *direct input* devices to capture data due to the large volume of data involved. Describe **two** types of input devices that may be suitable for this system. (4 marks)
- (d) Every business that employs people regardless of its size and industry experiences various organizational conflicts.
- (i) Explain **three** causes of such conflicts. (6 marks)
- (ii) Outline **two** effects of such conflicts to the organization. (2 marks)
4. (a) Outline **four** advantages of *digital cameras* over *analogue cameras*. (4 marks)
- (b) Many Internet service providers have continued to replace coaxial cables with fiber optic cables for Internet connectivity. Explain **three** reasons for this trend. (6 marks)
- (c) Explain **two** types of *random access memory* of a computer system. (4 marks)
- (d) Information technology has lately been introduced in many manufacturing plants. Explain **three** benefits of using this technology to the manufacturing industry. (6 marks)
5. (a) Joan has two choices of desktop publishing packages from which to buy one for the company. Explain **four** factors she should consider assuming the cost is the same for both packages. (8 marks)
- (b) The following is a list of tasks that an organization carries out on a daily basis:
- data collection and analysis on market opportunities for its products;
 - storage of employee's data;
 - creation of organization documents
- Identify the appropriate type of *software* the organization would use for each task, justifying your choice. (6 marks)
- (c) Computers use *utility software* to enhance the operation of the operating system. Explain **three** examples of such software. (6 marks)
6. (a) Explain **three** situations where the monitor may not be an appropriate output device. (6 marks)
- (b) Many companies face the challenge of electronic waste due to computerization. Explain **three** factors that contribute to the production of such waste. (6 marks)
- (c) With the aid of **four** examples, describe the term *microcomputer* as use in computer systems. (4 marks)
- (d) Explain **two** circumstances under which a *dot matrix printer* would be a suitable output device in an organization. (4 marks)
7. (a) Outline **four** functions of the operating system with regard to file management. (4 marks)
- (b) Most learning institutions have computerized their financial operations. Explain **three** ways that the system could help minimize fraud. (6 marks)

- (c) A software development company stores its programs in *CD-ROMs* for sale. Explain **two** benefits of this move to the company. (4 marks)
- (d) Call center staff spend most of their time using computers for data entry.
- (i) Explain **two** health-related problems to the staff that would be caused by each of the following devices:
- (I) key board; (4 marks)
- (II) CRT visual display unit. (4 marks)
- (ii) Suggest **one** solution for each of the devices that would minimize the associated health risks in (i). (2 marks)
8. (a) A software development company has employed a *systems programmer*. Outline **four** duties that could be assigned to the programmer. (4 marks)
- (b) Differentiate between *intrapersonal* and *interpersonal* types of conflicts in an organization giving an example in each case. (4 marks)
- (c) Many organizations have raised the concern that most graduates looking for employment lack *soft skills*. Explain **three** such skills that the organizations seek. (6 marks)
- (d) A commercial bank has offices in several floors of a building and other branches within the same city. The company intends to install a computer network to link all their offices. With the aid of a diagram, describe the most appropriate type of network for the company. (6 marks)

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