

1920/101
INTRODUCTION TO ICT
November 2016
Time: 3 hours



THE KENYA NATIONAL EXAMINATIONS COUNCIL
CRAFT CERTIFICATE IN INFORMATION COMMUNICATION
TECHNOLOGY

MODULE I

INTRODUCTION TO ICT

3 hours

INSTRUCTIONS TO CANDIDATES

*This paper consists of Section A and Section B.
Answer ALL questions in Section A and Any FOUR in Section B in the answer booklet provided.
Candidates should answer the questions in English.*

This paper consists of 5 printed pages.

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

SECTION A (40 marks)

Answer ALL Questions in this section.

1. State **two** differences between *software* and *hardware*. (4 marks)
2. Deco Company intends to acquire computers to be used in the offices. Explain **two** ways in which these computers could be classified. (4 marks)
3. (a) Define the term *Hard Disk* as used in computers. (1 mark)
(b) Outline **three** factors to be considered when selecting a hard disk for purchase. (3 marks)
4. State the component within the CPU that handles each of the following tasks:
 - (a) Addition and Subtraction;
 - (b) Temporarily stores the answers from arithmetic and logical operations before processing;
 - (c) Coordinates all activities in the processor;
 - (d) Carries out logical operations. (4 marks)
5. Differentiate between *second* and *fourth generation* computers in terms of the technology they used. (4 marks)
6. A technician in a computer laboratory noted that three computers were not functioning and needed to open them to confirm the source of the problem.
 - (a) Outline **two** precautions that the technician must observe when opening the computer. (2 marks)
 - (b) Explain **one** way in which he can ensure safety of the data in the affected computers. (2 marks)
7. State the category of application software suitable for each of the following, giving an example in each case:
 - (a) Store, retrieve and manage large sets of data; (2 marks)
 - (b) Arrange data in rows and columns for manipulation with calculations. (2 marks)
8. Explain a circumstance that would prompt an institution to set up each of the following computer networks:
 - (a) Local Area Network; (2 marks)
 - (b) Wide Area network. (2 marks)

9. (a) State the function of an *antistatic wrist strap* as used in computer maintenance. (1 mark)
- (b) State **three** considerations to be made before installing software on a computer system. (3 marks)
10. (a) Explain **one** purpose of a Network Interface Card (NIC) on a computer network. (2 marks)
- (b) Outline **two** benefits of using a client/server configuration in a Local Area Network. (2 marks)

SECTION B (60 marks)

Answer any **FOUR** questions in this section.

11. (a) With the aid of a block diagram, describe the functional organization of a computer. (6 marks)
- (b) Jane, a secretary at Company XYZ needs to prepare a document on the computer and present it both in hard and soft copy in a meeting.
- (i) State **two** *input* devices and **two** *output* devices that would enable her meet her objectives; (2 marks)
- (ii) State **three** devices that she can use to store her document. (3 marks)
- (c) AKIM Institute of photography and Graphics design has acquired a digital camera. Explain **two** ways in which the college can make use of the equipment. (4 marks)
12. (a) Hekima College has opted to set up a computer network based on star topology technology.
- (i) Outline **two** benefits that the college would achieve from the use of the topology. (4 marks)
- (ii) With the aid of a diagram, describe the star topology. (5 marks)
- (b) Explain how the college would use each of the following network transmission media:
- (i) Unshielded twisted pair cable (UTP);
- (ii) Fibre Optic Cable. (4 marks)
- (c) Explain the purpose of a *terminator* in a bus topology network. (2 marks)
13. (a) Delight is a new company where the management intends to acquire software to be used in its information processing. Describe giving an example in each case how they would use each of the following:
- (i) Operating systems; (2 marks)
- (ii) Utility programs; (2 marks)
- (iii) Language translators. (2 marks)
- (b) Outline **three** factors that the company should consider during the acquisition of the software. (3 marks)
- (c) Differentiate between *antivirus* and *firewall* software as used in computers. (2 marks)
- (d) Explain **two** ergonomic factors to consider when using a computer. (4 marks)

14. (a) With the aid of a diagram, explain the concept of *data hierarchy* in data processing. (5 marks)
- (b) Describe **one** situation where you would apply each of the following computer data processing methods:
- (i) Interactive processing; (2 marks)
 - (ii) Transaction processing. (2 marks)
- (c) Alex opted to use a computer tablet in carrying out his college assignment instead of using the college computers in the computer laboratory. Outline:
- (i) **two** advantages this approach offers; (2 marks)
 - (ii) **two** challenges of this approach. (2 marks)
- (d) Outline **two** ways in which ICT has been put to use in learning institutions. (2 marks)
15. (a) A business organisation recently introduced the use of ICT in managing its transactions. Outline:
- (i) **three** positive impacts of using ICT in the business; (3 marks)
 - (ii) **two** challenges that the organisation is likely to experience with the use ICTs in business. (2 marks)
- (b) Explain the activity carried out in each of the following stages of data processing life cycle.
- (i) Output and Interpretation; (2 marks)
 - (ii) Storage. (2 marks)
- (c) Explain the term *computer crime*. (2 marks)
- (d) Describe each of the following ethical issues in ICT:
- (i) Plagiarism; (2 marks)
 - (ii) Technology manipulation. (2 marks)

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