

1920/101  
INTRODUCTION TO ICT  
July 2018  
Time: 3 hours



THE KENYA NATIONAL EXAMINATIONS COUNCIL  
CRAFT CERTIFICATE IN INFORMATION TECHNOLOGY

MODULE I

INTRODUCTION TO ICT

3 hours

INSTRUCTIONS TO CANDIDATES

*This paper consists of TWO sections; A and B.*

*Answer ALL the questions in section A and any FOUR from section B in the answer booklet provided.*

*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.**

SECTION A (40 marks)

Answer ALL the questions in this section.

1. Explain each of the following *file access* methods in a computer system:
  - (i) random access;
  - (ii) indexed sequential. (4 marks)
2. Explain each of the following types of outputs, giving an example in each case:
  - (i) softcopy; - Document or Files that are ~~not~~ stored in computer
  - (ii) hardcopy. (4 marks)
3. Distinguish between the terms *bandwidth* and *broadband* as used in computer networks. (4 marks)  
*bandwidth →*
4. (a) Jacob has been requested to connect all the computers in the college on a *local area network*. State **four** networking hardware tools that would assist him to accomplish the task. *Testa*  
*- Router* (2 marks)  
(b) A certain organization intends to use *web-based* applications for its operations. Outline **two** drawbacks the organization is likely to face from this technology. (2 marks)
5. Merryland Hospital has installed a *database management system* for its operations. Explain **two** advantages of this system to the organization. (4 marks)
6. Mercy has been tasked to enforce the computer systems data security within her organization. Explain **two** logical measures she could implement to achieve this. (4 marks)
7. Outline **four** factors that should be considered during the acquisition of computer software. (4 marks)  
*- Security - Documentation*  
*- Warranty - Cost effectiveness*
8. Differentiate between *off-the-shelf* and *custom made* software. (4 marks)
9. Explain each of the following data processing modes:
  - (i) batch processing;
  - (ii) multi-processing. (4 marks)
10. Explain each of the following terms as applied in computer ethics:
  - (i) software piracy: *Legal act*
  - (ii) software patent. *- right of inventor* (4 marks)

SECTION B (60 marks)

Answer any **FOUR** questions from this Section.

11. (a) Outline **three** characteristics of a *real time* transaction processing system. (3 marks)
- (b) Universal Serial Bus devices have become popular with computer users. Explain **three** reasons for this trend. (6 marks)
- (c) Organizations face ethical issues as a result of continuous use of Information Communication Technology. Explain **three** such issues. (6 marks)

12. (a) A certain country has introduced the use of robots in the war zones. Outline **five** ways in which they could use these robots. *- To find the area - To go to* (5 marks)
- (b) Describe each of the following computer devices:
- (i) flatbed scanner;
- (ii) graphic tablet. *- To represent graphics* (4 marks)
- (c) Amani hospital intends to install a Local Area Network to all its offices that occupy two floors within the same building. Explain **three** advantages they would achieve from the network: *Resource sharing - cost saving effect - fast* (6 marks)

13. (a) Outline **three** elements of a computer file. *- Bit - 2 word - character field* (3 marks)
- (b) Distinguish between a *general purpose* and a *dedicated* computer, giving an example of each. (4 marks)
- (c) With the aid of a diagram, describe the functional components of the *central processing unit* in a computer system. *Control unit ALU* (8 marks)

14. (a) David acquired a computer and its related software for use in carrying out computer-aided design tasks. *assured*
- (i) Explain the term *software*. *- This is application native program* (2 marks)
- (ii) Explain **two** types of system software that he may acquire giving an example of each. *- System Software - Utility Software - clocks mac OS* (5 marks)
- (b) A computer may harm users if they frequently use it for long hours. Outline **three** health problems that could be caused by such prolonged use giving a remedy for each. *eye strain* (6 marks)
- (c) Joshua recommended the use of graphical user interface for first time computer users in the organization. State **four** features of this interface. *director* (2 marks)

- Use of icons*  
*- Menu driven*  
*- Format*  
*- Pointing device*

15. (a) State **three** advantages of *fibre optic* cables in computer networking. (3 marks)
- (b) Explain **three** positive impacts that ICT has on society. (6 marks)
- (c) Figure 1 shows network topologies applied in a certain college. Use it to answer the questions that follow.

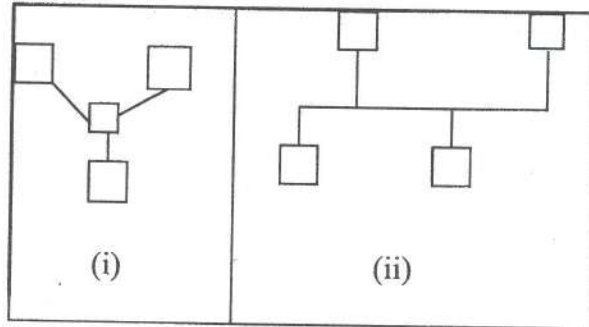


Figure 1

Describe each of the network topologies labelled (i) and (ii). (6 marks)

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