

2920/101  
INTRODUCTION TO INFORMATION  
COMMUNICATION TECHNOLOGY AND ETHICS  
November 2018  
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 THE CANDIDATES

*This paper consists of EIGHT questions.  
Answer any FIVE of the EIGHT questions 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.**

1. (a) Explain each of the following terms as used in computers:
    - (i) byte; (2 marks)
    - (ii) nibble. (2 marks)
  - (b) JK Company Ltd. intends to hire a consultant to address work conflicts among its staff. Assume that you are hired as a consultant, outline **four** strategies that you could recommend to address the conflict. (4 marks)
  - (c) (i) State **four** file formats supported by flatbed scanners. (2 marks)
  - (ii) Distinguish between *self esteem* and *self motivation* as applied in life skills. (4 marks)
  - (d) (i) Define the term *tender* as used in procurement of IT hardware and software. (2 marks)
  - (ii) Spamming is one of the unethical ICT behaviours in organizations. Explain **two** strategies that could be used to manage it. (4 marks)
2. (a) State **four** factors that should be considered when selecting the main memory for a computer. (4 marks)
  - (b) (i) DEF Company Ltd. intends to use data encryption to safeguard its data during transmission. Describe **two** encryption techniques it could use. (4 marks)
  - (ii) Polly was required to replace the toner of a printer for her boss. Outline **four** precautions that she should ensure in order to complete the task. (4 marks)
  - (c) (i) Token ring topology is widely used in cooperate computer network. Explain **two** of its advantages that could be influencing this trend. (4 marks)
  - (ii) Explain **two** circumstances under which an organization would install a hybrid network topology. (4 marks)
3. (a) (i) Outline **three** factors that should be considered when selecting a power supply, other than cost. (3 marks)
  - (ii) Distinguish between *volatile* and *non volatile* memory. (4 marks)
  - (b) Explain **three** negative impacts of social engineering in the society. (6 marks)
  - (c) Outline **three** circumstances under which computers would be disposed. (3 marks)
  - (d) Operating systems comes with several disk utility software. Outline **four** examples of such software. (4 marks)
4. (a) Explain each of the following types of disk storage technologies:
    - (i) optical; (2 marks)
    - (ii) magnetic. (2 marks)
  - (b) Differentiate between a *system-user* and a *super user*. (4 marks)
  - (c) Computers use ports to meet input and output needs. Describe **two** types of these ports that could be found in computers. (4 marks)
  - (d) (i) Anna was experiencing change management issues when rolling out social responsibility program in her company. Explain **two** strategies that she could use to mitigate this challenge. (4 marks)

- (ii) Off-the-shelf software is preferred for small/ medium sized business. Explain **two** reasons that could inform such a decision. (4 marks)
5. (a) Outline **three** possible causes of power failure in computers. (3 marks)
- (b) Explain **three** positive aspects of computer hacking in the society. (6 marks)
- (c) (i) Outline **two** qualities expected of a leader in a computer based organization. (2 marks)
- (ii) Charles intends to buy a computer monitor. Outline **three** types of monitors that he could select. (3 marks)
- (d) Operating system performs critical functions in a computer system. Explain **three** such functions. (6 marks)
6. (a) Explain **two** categories of software licensing options. (4 marks)
- (b) For each of the following case, identify the appropriate type of the network based on geographical coverage:
- (i) connect infinite number of networks; (1 mark)
  - (ii) connect computers within a building; (1 mark)
  - (iii) connect different offices of a county government in a town; (1 mark)
  - (iv) connect upcountry branches; (1 mark)
- (c) Passwords are synonymous with computer systems. Outline **four** guidelines that should be adhered to by computer users to benefit from this security feature. (4 marks)
- (d) (i) With the aid of an example in each case, describe **two** types of printer that could be used in business. (4 marks)
- (ii) Sam was nominated to chair an ICT meeting in his company. Outline **four** life skills that he could apply to realize success of the meeting. (4 marks)
7. (a) Differentiate between *Control Unit (CU)* and *Arithmetic & Logic Unit (ALU)* as used in computers. (4 marks)
- (b) For each of the following functions identify the appropriate category of keyboard keys that is responsible.
- (i) enter texts and numbers in text editor program; (1 mark)
  - (ii) modify the normal action of another key; (1 mark)
  - (iii) move the cursor to different positions on the screen.; (1 mark)
  - (iv) acts as a short cut to perform specific task in a computer. (1 mark)
- (c) Most government are striving to implement e-government to ease doing business. Explain **three** hindrances to this noble activity in sub Sahara Africa. (6 marks)
- (d) Morris intends to build computer network for his company. Explain **three** possible benefits that are likely to be realized by the staff. (6 marks)
8. (a) (i) List **four** examples of pointing devices used in computers. (2 marks)
- (ii) Differentiate between *competing* and *withdrawal* conflict management techniques (4 marks)

- (b) Outline **four** attributes that could be used to attest safeness of software. (4 marks)
- (c) Ahead Company Ltd. used pirated software in its computer systems. Explain **two** negative impacts that could be experienced by the company while using the software. (4 marks)
- (d) (i) Agnes was required to propose computer laboratory rules for her company. Outline **three** examples of rules that she could have proposed. (3 marks)
- (ii) Software as a service (SaaS) is slowly getting adopted by small business enterprises. Outline **three** factors that could be affecting its fast adoption. (3 marks)

THIS IS THE LAST PRINTED PAGE.