

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)

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