

2920/101

INTRODUCTION TO ICT AND ETHICS

November 2017

Time: 3 hours



THE KENYA NATIONAL EXAMINATIONS COUNCIL

DIPLOMA IN INFORMATION COMMUNICATION TECHNOLOGY

MODULE I

INTRODUCTION TO ICT AND ETHICS

3 hours

INSTRUCTIONS TO CANDIDATES

*This paper consists of **EIGHT** questions.*

*Answer any **FIVE** of the **EIGHT** questions in the answer booklet provided.*

All questions carry equal marks.

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) Outline **six** limitations of the first generation computers. (6 marks)
(b) Describe each of the following types of computers, stating an area of application for each:
(i) super computers;
(ii) mini computers. (4 marks)
(c) Distinguish between *multiprogramming* and *multiprocessing* as used in computer systems. (4 marks)
(d) Jeremy, the systems analyst for Kipeo Company, intends to acquire computers to be used in the company. Advise Jeremy on **three** factors other than cost, he should consider when selecting the computers. (6 marks)
2. (a) Describe each of the following types of *computer memories* used in a computer system:
(i) SRAM;
(ii) EPROM. (4 marks)
(b) Jadesh College intends to employ a systems analyst. Outline **four** roles that the analyst would perform. (4 marks)
(c) Explain **three** circumstances that would necessitate an organization to purchase an impact printer. (6 marks)
(d) The manager of Kilog Company has realized that most of their computer staff waste a lot of time on social media. Explain **three** strategies that he could introduce to minimize the time wastage. (6 marks)
3. (a) Explain the function of each of the following keyboard keys:
(i) Num Lock;
(ii) Escape. (4 marks)
(b) Describe each of the following terms as used in computer systems:
(i) plug and play;
(ii) BIOS. (4 marks)
(c) A certain company intends to hold a workshop on unethical behavior at the work place.
(i) Explain **two** such behaviors that could be mentioned. (4 marks)
(ii) Outline **two** measures that could be put in place to reduce the unethical behaviors. (2 marks)
(d) Jane is an ICT consultant at The Triple Company. She has advised the company to purchase *off the shelf software* to install on their new computers. Explain **three** reasons that may have contributed to this advice. (6 marks)

4. (a) Describe each of the following types of *computer buses*:
- (i) data bus;
 - (ii) control bus. (4 marks)
- (b) Jupiter Company has started performing various social responsibility activities within the community. Explain **three** benefits of these activities to the company. (6 marks)
- (c) Distinguish between *analogue* and *digital* computers. (4 marks)
- (d) A certain software developing company has resolved to have all its software copyrighted. Explain **three** advantages the company would gain from this move. (6 marks)
5. (a) Explain each of the following terms as used in ICT and ethics:
- (i) phishing;
 - (ii) firewall;
 - (iii) service pack. (6 marks)
- (b) Outline **four** functions of the network operating system software. (4 marks)
- (c) Distinguish between *fax machine* and *modem* as used in ICT and ethics. (4 marks)
- (d) A certain company intends to formulate and implement strategies to reduce stress among its computer staff. Explain **three** of these strategies. (6 marks)
6. (a) Explain **two** causes of conflicts between employees at the work places. (4 marks)
- (b) Differentiate between *dumb terminal* and *intelligent terminal* as applied in computer systems. (4 marks)
- (c) Explain **three** reasons that would necessitate a company to use *wireless media* over wired media in transmission of data. (6 marks)
- (d) With the aid of a diagram in each case, describe the following types of network topologies
- (i) ring;
 - (ii) bus. (6 marks)
7. (a) Explain **three** causes of *low self esteem* among employees in an organization. (6 marks)
- (b) Information Communication and Technology could be applied in research and engineering fields to perform various tasks. Outline **four** of these tasks. (4 marks)
- (c) Jacob intends to secure the company's data from being lost. Explain **three** software measures that he could put in place. (6 marks)
- (d) Distinguish between *confidentiality* and *authenticity* as applied in ICT and ethics. (4 marks)

8. (a) Outline **three** advantages of USB over serial ports as used in computer systems. (3 marks)
- (b) Describe each of the following types of disk storage technologies as used in computer systems:
- (i) optical;
 - (ii) magnetic. (4 marks)
- (c) Computer operators are exposed to health problems due to prolonged working for long hours with computers. Explain **four** of these health problems. (8 marks)
- (d) The following are features of an operating systems user interface. Use it to answer the questions that follow.
- Windows, Menus, Icons, Pointers.*
- (i) Identify the type of user interface described by the features. (1 mark)
 - (ii) Explain **two** advantages of this interface to the user. (4 marks)

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