

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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