

2920/101

**INTRODUCTION TO INFORMATION COMMUNICATION
TECHNOLOGY AND ETHICS**

November 2021

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 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) Outline **four** advantages of the *outsourcing* method of acquiring computer services. (4 marks)
- (b) Describe **three** benefits of flash disks as storage devices. (6 marks)
- (c) Distinguish between *defragmenter* and *debugger* as used in computers. (4 marks)
- (d) Sofia, a secretary at a technical institute, has low self-esteem. Explain **three** ways she could deal with this. (6 marks)
2. (a) Outline **three** positive effects of Information Communication Technology to a college student. (3 marks)
- (b) Figure 1 shows a computer input device. Use it to answer the questions that follow.



Figure 1

- (i) Identify the device shown in the Figure 1. (1 mark)
- (ii) Explain **two** advantages of the device identified in (i). (4 marks)
- (c) Explain **three** possible reasons that lead to unethical behaviour in Information Communication Technology. (6 marks)
- (d) A programmer is developing a computer program for an organisation using a high-level language. Describe **three** characteristics of such languages. (6 marks)
3. (a) Outline **four** advantages of a mesh computer network topology. (4 marks)
- (b) Differentiate between *minicomputer* and *microcomputer*. (4 marks)
- (c) George has noticed that his computer has been infected by a virus. Explain **three** symptoms this computer could have exhibited. (6 marks)
- (d) Plains Technical Institute computers have been attacked through the internet. Explain **three** cyber-crimes that could have been committed. (6 marks)
4. (a) Outline **four** types of Read Only Memory (ROM). (4 marks)
- (b) Distinguish between *compromising* and *collaborating* conflict management techniques. (4 marks)
- (c) Delight Company intends to hire a network administrator. Explain **three** skills that this computer personnel should possess. (6 marks)
- (d) Explain **three** circumstances under which a company could use telecommuting. (6 marks)

5. (a) Outline **four** ways a student could manage stress. (4 marks)
- (b) Describe each of the following terms as used in Information Communication Technology:
- (i) Information privacy; (2 marks)
- (ii) Copyright; (2 marks)
- (iii) Data protection. (2 marks)
- (c) Distinguish between *dumb* and *intelligent* terminals. (4 marks)
- (d) Jucktech Technical Institute has been undertaking unsuccessful social responsibility programmes. Explain **three** possible causes of this failure. (6 marks)
6. (a) Outline **four** benefits that a student could accrue from good time management. (4 marks)
- (b) Amani Counselling Clinic has been handling many domestic conflict issues among its workers. Explain **three** possible causes of such conflicts. (6 marks)
- (c) Figure 2 shows computer ports. Use it to answer the questions that follow.

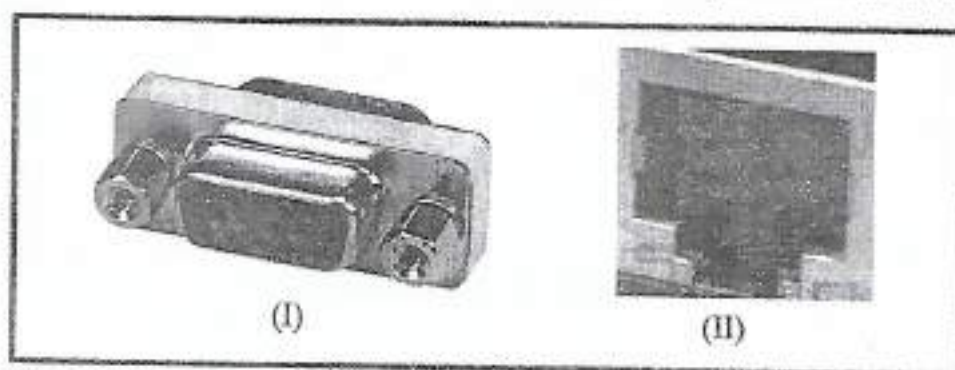


Figure 2

- (i) identify each of the ports depicted in the figure; (2 marks)
- (ii) explain **one** use of each of the ports identified in (i). (4 marks)
- (d) Julius installed an application software in his computer. Describe **two** classes of this software that he could have installed. (4 marks)
7. (a) Outline **four** types of people skills that should be possessed by an Information Communication Technology graduate. (4 marks)
- (b) Explain **three** circumstances that could necessitate the use of a batch method in data processing. (6 marks)
- (c) Differentiate between *logical* and *physical* access controls as used in data security. (4 marks)
- (d) Jacob, an ICT manger in a company, advised the management to acquire a mainframe computer for networking. Explain **three** reasons that could have led to this advice. (6 marks)

8. (a) Explain **three** characteristics of *real-time* data processing method. (6 marks)
- (b) Explain **two** circumstances that could lead to upgrading of a computer hard disk. (4 marks)
- (c) An ICT technician prefers to use a fibre optic cable in a computer network. Explain **three** reasons for this preference. (6 marks)
- (d) A company used ICT legislation and guidelines in developing its ICT policy. Outline **four** sources of these legislations and guidelines. (4 marks)

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