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)

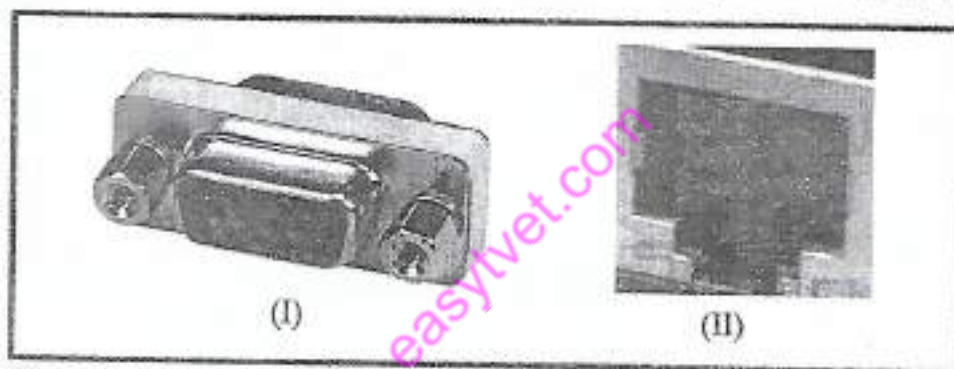(c) Figure 2 shows computer ports. Use it to answer the questions that follow.

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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