Time: 3 hours



## THE KENYA NATIONAL EXAMINATIONS COUNCIL

DIPLOMA IN MECHANICAL ENGINEERING
(PRODUCTION, PLANT AND CONSTRUCTION PLANT OPTIONS)
DIPLOMA IN AUTOMOTIVE ENGINEERING
DIPLOMA IN WELDING AND FABRICATION
DIPLOMA IN ELECTRICAL AND ELECTRONIC ENGINEERING
(POWER, TELECOMMUNICATIONS AND INSTRUMENTATION OPTIONS)
DIPLOMA IN BUILDING
DIPLOMA IN CIVIL ENGINEERING
DIPLOMA IN ARCHITECTURE

# **MODULE I**

INFORMATION COMMUNICATION TECHNOLOGY, COMMUNICATION SKILLS AND ENTREPRENEURSHIP EDUCATION

### 3 hours

### INSTRUCTIONS TO CANDIDATES

You should the following for this examination:

Answer booklet;

Scientific calculator/Mathematical table.

This paper consists of TWELVE questions in THREE sections; A, B and C.

Answer FOUR questions from section A, answer question SIX (compulsory) and any other ONE question from section B and any THREE questions from section C.

Maximum marks for each part of a question are indicated.

Candidates should answer the questions in English.

This paper consists of 6 printed pages.

Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.

Turn over

# SECTION A: INFORMATION COMMUNICATION TECHNOLOGY

Answer any FOUR questions in this section.

- 1. (a) List two computer devices that produce each of the following types of outputs:
  - (i) hardcopy;
  - (ii) softcopy.

(2 marks)

(b) Boby was recently recruited at an engineering company. He was issued with the following email address:

boby@qengineers.org

Identify three parts of this address.

(3 marks)

(c) Table 1 is an extract of a database thowing details of students in a college:

Table 1

S/No.	Reg. No.	FName	LName	Department	Fees Paid	
1.	IT010	Betty	Rael	Computing	18,000.00	
2.	HR0101	Aggy	Micheal	Business	24,000.00	
3.	EE108	Anne	William	Electrical	15,500.00	
4.	IT005	Ben	Peter	Computing	11,600.00	
5.	HR015	Chris	Daniel	Business	21,800.00	

- (i) State the most appropriate data type for each of the following fields citing a reason for the choice:
  - (I) SNo;
  - (II) fees paid.
- (ii) Identify the most appropriate field to be used as a primary key;

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(iii) State two uses of the primary key field identified in (ii).

(5 marks)

- 2. (a) Explain each of the following terms as used in operating systems:
  - (i) job scheduling;
  - (ii) job sequencing.

(4 marks)

2501/101 2508/101 2602/101 2707/101 2502/101 2509/101 2603/101 2709/101 2503/101 2601/101 2705/101 2710/101 (b) State the function of each of the following icons used in desktop publishing:







(3 marks)

- (c) An institution is in the process of installing a Local Area Network (LAN). Highlight three benefits that the institution may derive from installing this network. (3 marks)
- 3. (a) Outline two differences between first generation computers and third generation computers. (4 marks)
  - (b) State **two** uses of slide sorter view in presentation software. (2 marks)
  - (c) Explain the function of each of the following computer software:
    - (i) text editor;
    - (ii) sort utility.

5)

5)

s)

- (4 marks)

  Some organizations install pirated software in their computers. Highlight two measures that a software developer may put in place to prevent such piracy. (2 marks)
  - (b) Distinguish between a web browser and a web site in relation to the internet.

(4 marks) s)

(c) Table 2 is an extract of a spreadsheet showing monthly expenses of a certain shop.

Table 2

	A	В	C	D	E	F
1.	Item	Jan	Feb	March	April	Total
2.	Transport	1,800	1,850	CHARLES	1,900	Total
	Electricity	2,400	1,900	2,100	2,050	
	Telephone	900	1,020	850	1,580	
5.	Water	450	300	480	370	

4,450

ver

Wages

3,800

2,800

5,080

Write the appropriate functions to determine:

- (i) total expenses for the month of March;
- (ii) highest expense for wages;
- (iii) number of items whose expense was less than 1,000 for the month of April.

(4 marks)

- 5. (a) Identify **three** computer keyboard keys that may be used to move the insertion point in a text document. (3 marks)
  - (b) The following text was created using a word processor.

# **Expert Systems**

An expert system is a computer application developed to solve complex problems in a particular domain, at the level of extra-ordinary human intelligence and expertise.

Characteristics of expert systems:

- > High performance
- > Understandable
- > Reliable
- > Highly responsive

Explain four formatting features applied on the text.

(4 marks)

(c) Ponda Computer College wishes to convert one of its classrooms into a computer laboratory. Outline **four** factors that the management should consider when identifying the most suitable classroom. (3 marks)

### SECTION B: COMMUNICATION SKILLS

Answer question SIX (compulsory) and any other ONE question from this section.

6. (a) State three advantages of the television as a means of business communication.

(3 marks)

(b) Outline three features of grapevine communication.

(3 marks)

- (c) Explain the function of each of the following principles in written communication:
  - (i) consistency;
  - (ii) courtesy.

(4 marks)

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- (d) Fasi Limited, a leading manufacturer of engineering equipment, recently participated in an international trade exhibition. The report on the exhibition is ready. As the Communications Assistant, write a cover letter to accompany the report to the Board of Directors. (10 marks)
- 7. (a) State **three** circumstances under which a manager of an organization may prefer to communicate through the electronic mail (e-mail). (3 marks)
  - (b) Highlight **three** guidelines that should be followed when writing a business report.

    (3 marks)
  - (c) Outline **two** differences between vertical communication and horizontal communication. (4 marks)
- 8. (a) Rewrite each of the following sentences inserting the correct punctuation marks.
  - (i) One witness the president of the organisation was in his office at the time of the attack he could not possibly have seen the perpetrator.
  - (ii) During the ride Mr Jameson heard Simon scream help grandpa and felt Simon clutch his shirt.

(2 marks)

- (b) Outline **two** reasons that may make participants of a meeting not to reach a consensus. (2 marks)
- (c) State three ways in which an interviewer may enhance the conduciveness of an environment for a recruitment interview. (3 marks)
- (d) Highlight **three** objectives that the public relations department in an engineering firm may seek to achieve. (3 marks)

### SECTION C: ENTREPRENEURSHIP EDUCATION

Answer any THREE questions from this section.

9. Imma is in the process of evaluating a business opportunity. State three factors that (a) she may consider to effectively evaluate the opportunity. (3 marks) Highlight three roles of an entrepreneur during the start-up phase of a business. (b) (3 marks) Explain the term outsourcing as used in entrepreneurship. (c) (i) Identify two services that a business enterprise may outsource. (ii) (4 marks) 10. (a) State three contributions of commercial banks to the growth of small businesses in Kenya. (3 marks) (b) Fryda has noticed that he fails to achieve his work objectives due to poor time management. Outline three measures that he may take to correct this situation. (3 marks) There is increased emphasis for an entrepreneur to prepare a business plan before (c) starting a business. Outline four reasons that may account for this emphasis. (4 marks) 11. State three factors that may limit the growth of small businesses in a country. (a) (3 marks) (b) Outline three outcomes of poor record keeping in a business enterprise. (3 marks) Highlight four benefits that may be associated with using computer technology when (c) marketing a product. (4 marks) 12. (a) Outline three ways in which a business enterprise may contribute to responsible behaviour in a community. (3 marks) List six attributes of a successful entrepreneur. (3 marks) (b) Some entrepreneurs run businesses from their homes. Outline benefits that an (c) entrepreneur may derive from such an approach. (4 marks)

## THIS IS THE LAST PRINTED PAGE.

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