2501/101 2508/101 2602/101 2707/101 2502/101 2509/101 2603/101 2709/101 2503/101 2601/101 2705/101 2710/101 INFORMATION COMMUNICATION TECHNOLOGY,

COMMUNICATION SKILLS AND

ENTREPRENEURSHIP EDUCATION

June/July 2017

Time: 3 hours





THE KENYA NATIONAL EXAMINATIONS COUNCIL

DIPLOMA IN MECHANICAL ENGINEERING
(PRODUCTION), (PLANT OPTION), (CONSTRUCTION PLANT OPTION)
DIPLOMA IN AUTOMOTIVE ENGINEERING
DIPLOMA IN WELDING AND FABRICATION
DIPLOMA IN ELECTRICAL AND ELECTRONICS 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

This paper consists of EIGHT questions in THREE sections; A, B and C. Follow the instructions provided at the beginning of each section All answer should be written in the answer booklet provided.

Maximum marks for each part of a question are as indicated.

Candidates should answer the questions in English.

This paper consists of 7 printed pages.

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

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Turn over

SECTION A: ICT (40 marks)

Answer FOUR question from this section.

- (a) (i) Explain the term *booting* as used in computers. (1 mark)
 - Outline two circumstances that could necessitate warm booting. (ii) (1 mark)
 - Figure 1 shows a section of a typical toolbar in a spreadsheet program. Use it to answer (b) the question that follows.

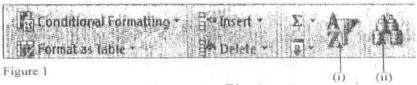


Fig. 1

Explain the function of each of the features labelled (i) and (ii).

(2 marks)

James, a technician in an engineering company would like to buy CAD (c) software for office use. Explain three factors that he could put into consideration.

(3 marks)

- With the aid of a sketch in each case, differentiate between flip over and flip up (d) (i) print options as used in desktop publishing programs. (2 marks)
 - (ii)John designed a publication with an object and would like to text wrap it. State four text wrapping options available. (I mark')
- 2 Explain each of the following data types as used in database programs: (a)
 - (i) auto number;
 - (ii) memo.

(2 marks)

Figure 2 shows a section of typical toolbar in a presentation program. Use it to (b) (i) answer the question that follows:

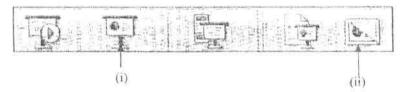


Fig. 2

2

Outline the function of the features labelled (i) and (ii).

(1 mark)

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- (ii) Outline one reason that could make an engineer demonstrate a project report using a presentation program. (1 mark)
- (c) Figure 3 shows data in a spreadsheet program. Use it to answer the questions that follow:

	A	В	C	D D
1	MATERIAL	CATEGORY *	PRICE	Discount Amount
2	cement	Α	35,000	
3	ballast	A	27,000	
4	concrete	A	22,000	
5	iron sheets	В	36,000	
6	sand	A	45,000	
7	water	С	15,000	
8	doors	В	30,000	
9	DISCOUNT	10%		
10	TOTAL PRICE FOR CATEGORY B MATERIALS		The second	
11	NUMBER OF MATERIALS IN CATEGORY A			

Fig. 3

- (i) Using cell referencing only, write a function that could be used to:
 - Calculate the total price for category B materials.

(1 mark)

(II) Display the number of category A materials.

(1 mark)

(ii) Using cell referencing only write a function that could be used to calculate the discount amount. Assume that a discount of 10% is offered on materials in category B.

(2 marks)

- (d) Differentiate between *datasheet* and *design* view options of a table in a database program. (2 marks)
- 2. (a) (i) Define each of the following features as used in a word processing program.
 - (I) Watermark;

(II) Drop cap.

(1 mark)

(ii) Differentiate between hanging and first line indent.

(2 marks)

(b) Differentiate between shareware and freeware as used in information security.

(2 marks)

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(c)	When interacting with a newly developed database system, Janet, an engineering company technician came across the following database objects:		
	(i) (ii) (iii) (iv)	a graphical interface object to display, edit and insert data; an object to select/ retrieve a record from one or more tables; an object to output data arranged in a specified order; an object that organizes information in rows and columns.	
	Identif	y the database object described in each case.	(2 marks)
(d)	Passwords could be used for data security, however they have some weakness. Exp three weaknesses associated with passwords. (3 ms		
(a)	Explai	in each of the following information security features:	
	(i) (ii)	replication; backup.	(2 marks)
(b)	(i)	A certain engineering firm has the following ICT equipment:	
		 Plotter; Scanner; MICR; Monitor; Sensor; Joystick. 	
		Classify the equipment as either input or output devices.	(2 marks)
	(ii)	Outline activities that a user could carry out when caring for a comput	ter mouse. (1 mark)
. (c)	(i)	Differentiate between <i>centre</i> and <i>justify</i> text alignment options as used processing program.	d in a word (2 marks)
	(ii)	Explain the function of the format painter feature in a word processin	g program. (1 mark)
(d)	Expla	ain the function of each of the following utility software:	(2 marks)
	(i) (ii) (iii) (iv)	disk cleanup; defragmenter; linker; compiler.	

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4.

5. (a) Outline four challenges of using speech recognition software.

(2 marks)

- (b) (i) An engineering company with several offices occupying three floors of a building is contemplating automating their operations. Explain three circumstances that would influence the inter connection of their computers.

 (3 marks)
- With the aid of a diagram in each case, distinguish between star and bus topology as used in computers. (2 marks
 - (c) Figure 4 shows an extract from a DTP program. Use it to answer the question that follows:

The Construction Industry

The construction industry is very important for the *Kenya economy*. It accounts for 5% of the country's **GDP** and employs about 1 million people with an estimated annual wage bill of Sh3.2 billion.

According to recent findings by National Bureau of Statistics (NBS), Kenya's economy grew by 4.9% in the first quarter of 2011 thanks to the improved productivity in the construction industry.

NBS reported that the industry contributed Sh12.6 billion to countries GDP in 1st quarter of 2011 buoyed by the large road infrastructure projects currently under way across the country.

The construction was also reflected in cement consumption which rose from 77.3 million tonnes up from 667.1 million tonnes consumed in 2010.

This has seen an increase on the demand for other engineering professionals to be subcontracted in this industry.

Fig. 4

Identify four formatting features applied in the extract.

(2 marks)

(d) Name two devices used for data processing in the pre-computer era.

(1 mark)

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SECTION B (30 marks)

COMMUNICATION SKILLS

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

State two reasons that make it necessary for organizations to place advertisements in 6. (a) the newspaper. (2 marks) (b) Identify three methods that may be used to convey oral messages in an organization. (3 marks) Highlight three benefits of using video conferencing as a method of communication. (c) (3 marks) (i) List two advantages of effective upward communication in an organization. (d) (2 marks) (ii) State two ways in which the management of an organization may control the harmful effects of grapevine communication. (2 marks) Most managers prepare and circulate an agenda in preparation for a meeting. Explain (e) two reasons that may account for this practice. (2 marks) List two areas on which an interviewee may ask questions during an interview, if given (1) a chance. (2 marks) Explain two ways in which the medium of communication may bar effective (g) transmission of the message. (2 marks) Outline two methods that may be used to collect date for report writing. (2 marks) (h) 7. Distinguish between internal and external communication. Give an example in each (a) case. (2 marks) As the communication assistant in Pengo Engineering Works, state three guidelines you (b) would follow when designing notices for communication. (2 marks) Mak Engineering Limited has received an assortment of equipment as donation from (c) a local Non-Governmental Organization (NGO). As the communications officer, write a letter to the management of the NGO acknowledging receipt of the equipment and appreciate the kind gesture. (6 marks)

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- 8. (a) Communication can be defined as a process which involves the transmission and accurate replication of ideas ensured by feedback for the purpose of eliciting actions which will accomplish organisational goals.

 State two important points emphasized in this definition. (2 marks)
 - (b) Architect Kwetu has requested for your advice in choosing a medium of communication. Suggest **two** factors that he should consider when making an appropriate choice. (2 marks)
 - (c) The management of Bandon Engineering Works Limited emphasizes on presenting written instead of oral reports. Explain three reasons for this emphasis. (6 marks)

SECTION C (30 marks)

11 8 AUG 2707 ENTREPRENEURSHIP EDUCATION

Answer any THREE questions from this section.

- 9. (a) State five reasons that may make a business plan fail. (5 marks)
 - (b). Outline five strategies that an organization may take to demonstrate its responsibility to the community living around its area of operation. (5 marks)
- 10. (a) Outline **four** measures that an organization may adopt to manage its business finances effectively. (4 marks)
 - (b) State six steps that may be followed to start a small enterprise. (6 marks)
- 11. (a) State **four** contributions of entrepreneurship to the economic development of a country.

 (4 marks)
 - (b) Explain three conditions that may make a business opportunity viable. (6 marks)
- 12. (a) State **four** limitations of using e-commerce in business. (4 marks)
 - (b) Explain **three** ways in which the political environment of a country may negatively influence entrepreneurial development. (6 marks)

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