

NAME.....INDEX NO.....CLASS.....

SCHOOL.....CANDIDATES SIGNATURE.....

DATE.....

451/1
COMPUTER STUDIES
PAPER 1
(THEORY)
JULY 2018
TIME: 2½ HOURS

LANY ACHIEVERS F4 EXAMINATION – 2018

Kenya Certificate of Secondary Education
COMPUTER STUDIES
PAPER 1
(THEORY)
TIME: 2½ HOURS

INSTRUCTIONS TO CANDIDATES

- This paper consists of **TWO** Sections **A** and **B**
- Answer all questions in Section **A**
- Answer question **16 (compulsory)** and any other **THREE** question in section **B**
- All answers should be written in the space provided in the question paper

FOR OFFICIAL USE ONLY:

Section	Question	Candidates Score
A	1-15	
B	16	
	17	
	18	
	19	
	20	
Total Score		

*This paper consists of 14 printed pages.
Candidates should check the question paper to ascertain that
all pages are printed and no questions are missing*

SECTION A (40 MARKS) *Answer all the questions in this section*

1. Give two advantages of digital data over analog data. (2marks)

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2. Differentiate the following as used in word processors

(a) Page break and column break. (2marks)

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(b) Footnotes and endnotes. (2marks)

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3.(a) Name **two** special purpose memories found either inside or outside the microprocessor(2marks)

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(b) Distinguish between the two memories named above. (2marks)

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4. Dickitoto visited a computer shop and noted stickers (labels) on desktop and laptop computers with the following information:

- ✓ *Intel core- i 3* :-
- ✓ *3.0 GH* :-
- ✓ *Windows 10 ®* :-
- ✓ *4 GB RAM* :-
- ✓ *500GB SATA HDD* :-

i) Identify the : **processor speed; primary storage; type o f OS and the type of processor** (indicate your answer against the match) (2marks)

5. (a) Define the term normalization as used in a database design. (1mark)

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(b) Explain **two** objectives of normalization. (2marks)

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6. (a) Define the following terms with reference to computer crime

i) Cracking (1mark)

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ii) Hacking (1mark)

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(b) State any two laws governing protection of information (2marks)

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7. What is meant by the term dry running as used in program development? (1mark)

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8. List any three differences between while.....do and Repeat.....Until control structures (3marks)

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9. List **any two** types of

a) Optical disk (1mark)

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b) Magnetic disk (1mark)

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10. Distinguish between Disk formatting and disk partitioning (2marks)

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11. (a) **State and define** any two types of computer processing file (1mark)

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(b) **List any two** file organization methods (2marks)

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12. List **four** social negative effects of networking computers. (2marks)

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13. a) Explain artificial neural network (1mark)

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b) List **two** essential attributes of a neural network

(2marks)

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14. Differentiate between job displacement and job replacement

(2marks)

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15. a) What is a hard copy

(1mark)

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b) State two reasons why hardcopy output is still very necessary today

(2marks)

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SECTION B (60 MARKS)
ANSWER QUESTION 16 AND ANY OTHER THREE QUESTIONS
FROM THIS SECTION

16 a) Define the terminologies;- (4marks)

i) Source code

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ii) Object code

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c) With an aid of a pseudocode and flow chart, write a computer program that can be used to compare the values of two numbers and print the largest number.

(11marks)

Flow chart

17. a) Define the term network topology. (1mark)

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b) Name three different types of computer network topologies. (3marks)

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c) Outline any four functions of network operating systems. (4marks)

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d) Explain the following as used in internet services (3marks)

i) E- mail

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ii) E- commerce

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iii) E- learning

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e) Piracy means making illegal copies of copyrighted software, information or data.
Outline any four ways in which the copyright law can help to reduce piracy (4marks)

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18. a) Define the term data communication. (1mark)

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b) Explain the following terms as used in data communication. (2marks)

i) Bandwidth

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ii) Attenuation

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c) Explain the following three types of computer networks (3marks)

i) LAN

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ii) MAN

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iii) WAN

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d) i) What are robots.

(1mark)

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ii) Outline any four advantages of using robots in industries over human beings. (2marks)

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e) Describe the following communication modes giving an example in each case. (6marks)

i) Simplex

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ii) Half duplex

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iii) Duplex

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19.a) Convert

(i). $0.111011.010_2$ to Octal (2marks)

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(ii). 321_8 to its Binary equivalent (2marks)

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(iii). $5E_{16}$ into Binary (2marks)

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(iv). 110100010111_2 to hexadecimal (2marks)

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b) Give the reason why octal and hexadecimal numbers are preferred to binary (1mark)

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c) Briefly Explain the three data coding schemes (6 marks)

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20.

	NAME	ADMN	ENG	KISW	MATH	CHEM	BIO	PHY	GEO	TOTAL
1	JOHN	82	43	92	87	32	20	24	78	5571459
2	ANDREW	82	38	92	87	32	20	24	78	5571459
3	BRIAN	78	38	85	86	78	32	38	53	5571459
4	JOSEPH	67	67	65	45	43	63	76	56	6520573

a) Write a formula that has been entered in cell J2 (2 marks)

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b) Differentiate between the following excel data types (4 marks)

(i). Labels and values

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(ii). Function and formula

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c) Differentiate the following terms as used in word processing (5 marks)

(i). Insert and Type over

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(ii). Copying and Moving

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(iii). Backspace and Delete

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(iv). Undo and Redo

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(v). Auto complete and Autocorrect

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d). Explain the following database features (4 marks)

(i). Table/File.

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(ii). Report

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(iii) Queries

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(iv). Form

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