

NAME DATE

INDEX NO. CANDIDATE'S SIGNATURE

451/1
COMPUTER STUDIES
PAPER 1
(THEORY)
JULY, 2010
TIME: 2½ HOURS

MUTITO FORM FOUR JOINT EVALUATION TEST

Kenya Certificate of Secondary Education

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

INSTRUCTIONS TO CANDIDATES

Answer all questions in section A.

Answer question 16 (**Compulsory**) and any other **THREE** questions in section B.

All answers should be written in the spaces provided in the question paper

FOR EXAMINER'S USE ONLY.

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

This paper consists of 11 printed pages. Candidates should check the question paper to ensure that all the papers are printed as indicated and no questions are missing.

SECTION A: (40 MARKS)

Answer all the questions in this section

1. A computer should be connected to a stable power supply. Highlight **two** reasons. (2 marks)

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2. a) Give **four** characteristics of cathode ray tube monitors. (2 mark)

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- b) Name **two** examples of flat panel display (FPD). (2 marks)

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3. Optical storage media are preferred as compared to magnetic media give **four** reasons. (2 mark)

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4. Many organizations nowadays use in-house developed programs. Highlight **four** disadvantages of standard software over in house developed software. (2 marks)

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5. Briefly explain classification of operating system by human computer interface. (3 marks)

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6. Differentiate the following:

i) Insert mode and typeover mode.

(2

marks)

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ii) Text alignment and indentation.

(2

marks)

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7. a) Explain the functions of the following spreadsheet inbuilt functions.

i) SUM IF

(1 mark)

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ii) COUNT

(1 mark)

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b) Explain the term “*What if analysis*” as used in spreadsheet.

(2 marks)

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8. Controls in database can either be bound or unbound. Explain.

(2

marks)

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9. State **three** ways of moving round the page in a desktop publishing window.

(3

marks)

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10. Why is it difficult to detect and prevent computer crimes? Give **four** reasons. (2 marks)

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11. Mrs. Jane decided to use electronic data processing method to analyze her data. Highlight **four** factors to consider while choosing the method to use. (2 mark)

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12. a) State **two** disadvantages of mesh topology. (1 mark)

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b) Name **two** functions of network operating system. (1 mark)

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13. a) Define the term *artificial intelligence*. (1 mark)

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b) List **four** areas where artificial intelligence is applicable (2 marks)

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14. a) Give **four** features of micro computers and ICT in future. (2 marks)

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b) Name **two** advantages of automated manufacturing. (1 mark)

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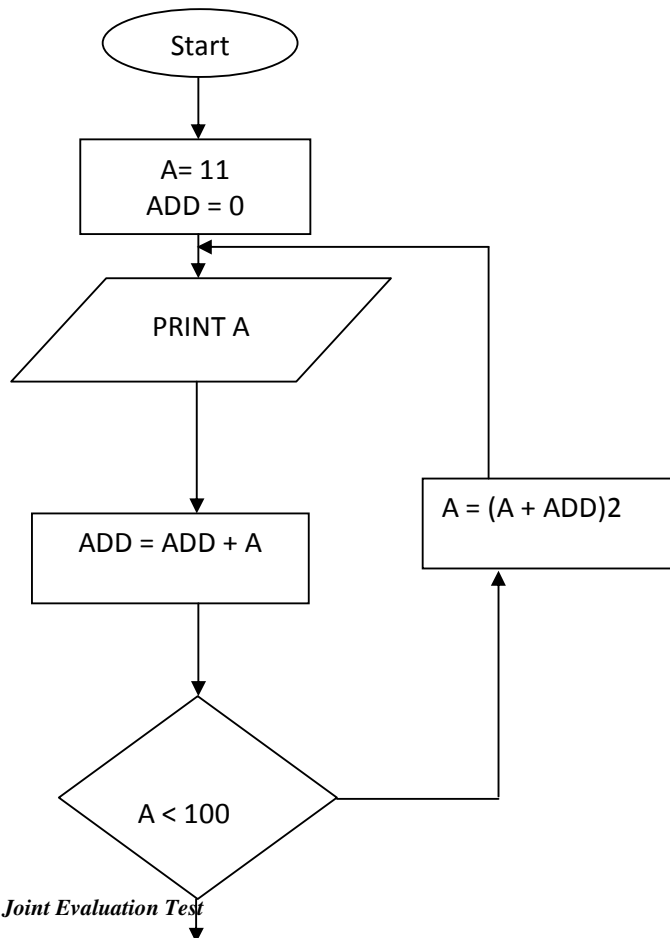
15. Highlight **three** types of job opportunities that are available in the field of computer software. (3 marks).

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SECTION B: (60 MARKS)

Answer question 16 is compulsory and any other **three** questions from this section.

16. Study the flowchart below and answer the questions that follow:



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ii) List **all** the outputs from the flowchart. (6 marks)

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iii) Name the control structure used. (2 marks)

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17. a) Define the term *simulation*. (1 mark)

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b) Highlight **four** areas where simulation is applicable. (2 marks)

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c) Give **four** disadvantages of a good system analyst. (2 marks)

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d) Name **four** qualities of a good system analyst. (2 marks)

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e) What do you understand by the term Artificial Neural Network? (2 marks)

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f) Give **two** features of neural networks. (2 marks)

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g) Explain the following conditions

i) Computer Vision Syndrome (CVS) (2 marks)

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ii) Repetitive Stress Injury (RSI) (2 marks)

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18. a) Briefly explain the following terms as used in networking. (2 mark)

i) Distributed processing. (2 marks)

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ii) Remote communication. (2 marks)

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b) Many people today prefer use of cell phones instead of fixed lines. List **four** advantages of cell phones. (2 mark)

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c) Distinguish between logical and physical network topology. (2 marks)

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d) A school decided to replace its administration system. The current system had restricted reporting facilities. The school is considering using parallel running and direct changeover.

i) Explain the terms parallel running and direct changeover. (2 marks)

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ii) Give **four** disadvantages of direct changeover. (2 marks)

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e) Name **three** tasks carried out during system implementation. (3 marks)

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19. a) Give and explain **two** computational errors committed during data processing. (2 mark)

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b) Highlight **four** ways of minimizing threats to data integrity. (2 marks)

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c) Name **three** risks associated with distributed data processing system. (3 marks)

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d) Differentiate between logical and physical computer files. (2 marks)

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e) Give **two** advantages of compiling a program rather than interpreting it. (2 marks)

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f) Highlight **four** errors detecting methods used in program development. (2 marks)

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g) Give **four** benefits of structural programming. (2 marks)

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20. a) Internet connects millions of computers and telecommunication devices that have different software and hardware configurations.

i) Explain how these devices work together. (2 marks)

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ii) Name **four** telecommunication devices used. (2 marks)

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b) Outline **four** ways of preventing piracy with regard to data and information. (2 marks)

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c) Perform the following operations.

i) 7ABEX to denary. (2 marks)

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i) $37_{10} - 13_{10}$ using two's compliment giving your answer to 8 binary digit. (3 marks)

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d) List and explain the **three** parts of the window taskbar. (3 marks)

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e) Give **two** reasons why the hard disk may be partitioned. (1 mark)

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