

NAME.....

INDEX NO.....

SCHOOL.....

SIGN.....

DATE.....

451/1

COMPUTER STUDIES

PAPER 1 (THEORY)

FORM 4

MARCH 2013

TIME: 2½ HOURS

PENTAGON JOINT EXAMINATIONS WARENG DISTRICT

The Kenya Certificate of Secondary Education

INSTRUCTION TO CANDIDATES

- ❖ Write your **name** and **admission number** in the spaces provided above
- ❖ This paper consists of **two** sections **A** and **B**.
- ❖ Answer **ALL** questions in section **A**.
- ❖ Answer question **16** and any other **THREE** questions from section **B**.
- ❖ All answers should be written in the spaces provided on the question paper.
- ❖

FOR EXAMINERS USE ONLY

Section	Questions	Candidates Score
A	1-15	
B	16	
	17	
	18	
	19	
	20	
TOTAL SCORE		

SECTION A: 40 MARKS

1. (a) Distinguish between a mouse pointer and an insertion point. (2 marks)

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(b) Differentiate between COM ports and LPT ports. (2 marks)

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2. Differentiate between a footnote and an endnote as used in ms-word. (2 marks)

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3. The magnitude of number is evaluated using 3 parameters. State the parameters. (3 marks)

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4. (a) What is data processing cycle? (2 marks)

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(b) Why is the process in 4(a) above referred to as a cycle? (1 mark)

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5. Define the following terms as used in data communication: (3 marks)

(i) Attenuation

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(ii) Band width

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(iii) Multiplexing.

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6. (a) List **three** major elements of networking. (1 ½ marks)

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(b) State **three** advantages of fiber optic cables. (1 ½ marks)

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7. Differentiate between the following terms: (2 marks)

(i) Syntax and logical errors.

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(ii) Interpreter and compiler.

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8. (a) List **three** error detection methods. (1 ½ marks)

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(b) State **three** theories of system development. (1 ½ marks)

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9. List **six** layout components available in a PageMaker application window. (3 marks)

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10. Differentiate between tracking and kerning as used in DTP. (2 marks)

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11. List **four** examples of action queries. (2 marks)

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12. Highlight **three** responsibilities of a computer programmer.

3 marks)

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13. State **two** major uses of optical disks.

(2 marks)

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14. What is an interrupt as used in the operating system?

(1 mark)

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15. Define the term multimedia.

1 mark)

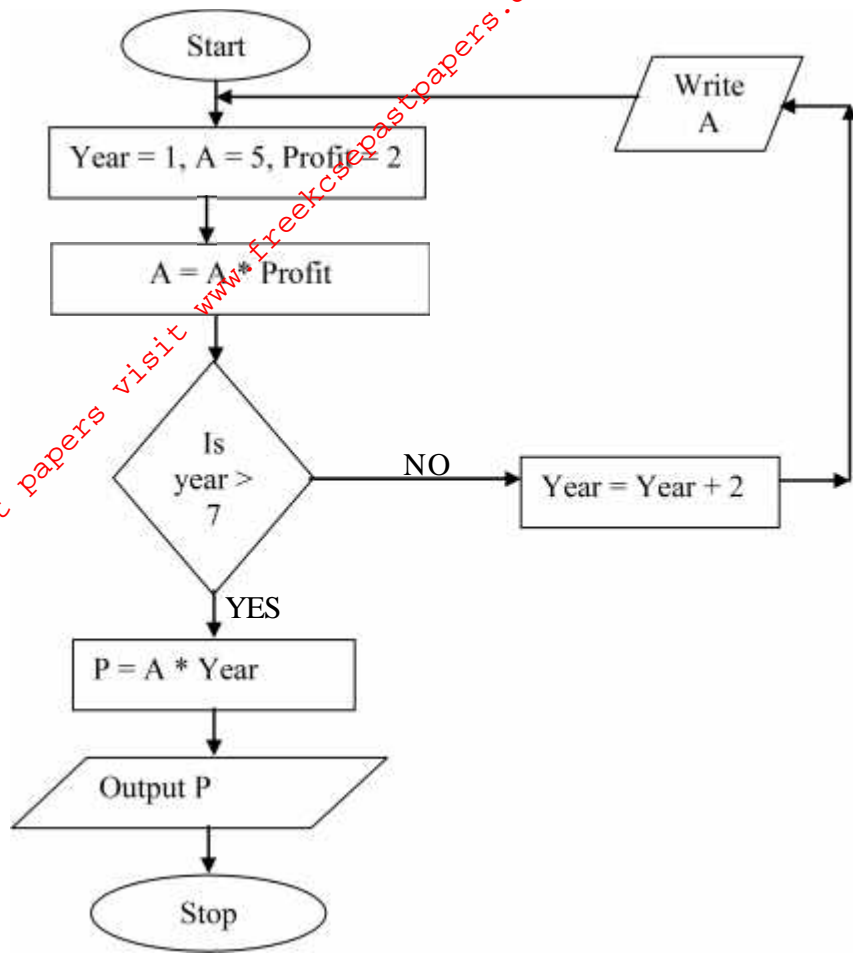
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SECTION

Answer question 16 and any other three questions in this section.

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



(a) List the various outputs from the flowchart above. Show your working. (6 marks)

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(b) Write a pseudocode for the flowchart. (6 marks)

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(c) List **three** types of documentation used during program documentation. (3 marks)

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17. (a) List **two** devices used in wireless communication. (2 marks)

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(b) State and explain any **three** communication devices. (6 marks)

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(c) State **four** functions of network operating systems. (4 marks)

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(d) With the aid of a diagram, describe the mesh topology. (3 marks)

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18. (a) List and explain three changeover strategies used in system development. (6 marks)

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(b) State the stage of system development life cycle in which each of the activities below take place:

(i) Determination of the cost-effectiveness of a system; (1mark)

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(ii) Interviews are carried out; (1mark)

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(iii) Replacement of an old system with a new one. (1mark)

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iv) Writing a blueprint for the new system using an algorithm. (1mark)

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(c) Differentiate between share level security and user level security as used in network security. (2 marks)

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(d) List three examples of protocols found at the application layer of OSI model (3 marks)

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19. (a) Differentiate between the following pairs of terminologies:

(i) Videotex and teletext (2 marks)

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(ii) Computer aided design and computer aided manufacturing. (2 marks)

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(b) What is virtual reality? (2 marks)

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(c) List four interactive sensory equipment used in virtual reality. (4 marks)

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(d) What is telecommuting? (2 marks)

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(e) State three advantages of telecommuting. (3 marks)

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20 (a) What is an expert system? (2 marks)

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(b) State and describe three components of an expert system. (6 marks)

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(c) Using two's compliment, subtract $13_{10} - 10_{10}$. (4 marks)

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(d) Convert the decimal number 0.640_{10} to 6 bit binary notation. (3 marks)

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