

NAME.....INDEXNO.....
SCHOOL.....SIGNATURE.....DATE.....

COMPUTER STUDIES

451/1

PAPER 1(Theory)

JULY/AUGUST2010

TIME: 2½HRS

BOMET / CHEPALUNGU DISTRICTS JOINT EXAMINATION. M-CATS

Kenya certificate of secondary education 2010

INSTRUCTION TO CANDIDATE

- This paper consist of TWO sections A and B
- Answer all questions in section A
- Answer question 16 and other THREE questions from section B
- All answers should be written in the spaces provided on the question paper

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| SECTION | QUESTION | SCORE |
|-------------|----------|-------|
| A | 1-15 | |
| B | 16 | |
| | 17 | |
| | 18 | |
| | 19 | |
| | 20 | |
| TOTAL SCORE | | |

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1.a) Define the term ‘operating system’

(1mk)

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b) State three classifications of operating system in terms of their interfacing. (3mks)

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2. a) Define the term computer laboratory

(2mks)

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b) Explain two factors to be considered when preparing a computer laboratory.

(4mks)

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3. Briefly explain the following terms as used in disk management

(i) Fragmentation

(1mk)

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(ii) Compression

(1mk)

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(iii) Disk partitioning (1mk)

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4. What are turn around documents? (2mks)

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b) Name any two data capture techniques that make use of turnaround document. (2mks)

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5.a) Define the term 'algorithm.' (1mk)

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b) Write an algorithm to compute the area of a triangle (2mks)

6.a) Describe three functions performed by the CPU (3mks)

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7. Differentiate between Batch processing and real time processing modes. (2mks)

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8.a) What is document formatting? (2mks)

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b) Give any five document formatting features of a word processor (5mks)

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9. What is electronic spread sheet software. (2mks)

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b) A worksheet contains the data shown below

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|-------|----------------|----------------|----------------|----------------|----------------|----------------|--|
| Cell | A ₁ | A ₂ | A ₃ | C ₁ | C ₂ | C ₃ | G ₁ |
| Entry | 5 | 7 | 10 | 10 | 15 | 15 | =sum if(A ₁ :C ₃ ,"<=10") |

State the value displayed in G₁ (2mks)

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10.a) Define the term normalization as used in data base design (2mks)

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b) State three objectives of normalization. (3mks)

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11. What is text wrap. (2mks)

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b) Explain three ways you can wrap-text an object. (6mks)

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12. Name the two most common protocols for the internet (2mks)

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13. Explain the following:

(i) Data security (2mks)

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(ii) Data integrity (2mks)

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14. Distinguish between logical and physical computer file (4mks)

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15. Name two methods of paper orientation as used in DTP (2mks)

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SECTION B : (40MKS)

Answer question 16 and any other THREE questions from this section on the spaces provided

16. MOLYN sawing society (MSS) pays 10% interest on shares exceeding ksh100, 000 and 6% on shares that do not meet this target. However no interest is paid on deposits in the members MSS bank account.

a) Design a pseudocode program that would:

(i) Prompt the user for shares and deposits of a particular member

(ii) Calculate the interest on total savings

(iii) Display the interest and total savings on the screen for a particular member of the society (7mks)

b) Draw a flow chart for the above pseudocode (8mks)

17. A manager wishes to replace the current manual system with a computerized one

a) Describe three main areas that must be evaluated to justify the replacement. (6mks)

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b) List the three areas that would be considered in the requirement specifications (3mks)

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c) Explain three ways that can be followed to replace the system. (6mks)

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18.a) Subtract 0111_2 from 1001_2 (1mk)

b) Using two's complement subtracts 7 from 2 and give the answer in decimal notation. (4mks)

c) Convert: (i) $91B_{16}$ to octal (3mks)

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(ii) 376_8 to hexadecimal

(3mks)

(iii) 9.625_{10} to binary

(4mks)

19.a) Outline the features applications, advantages and disadvantages of the on-line data processing mode. (8mks)

b) Explain the use of the following file in an organization

(i) Master file (2mks)

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(ii) Transaction file . (2mks)

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(iii) Back-up file (2mks)

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(iv) Report file (1mk)

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20.a) With the aid of a diagram briefly describe any three types of network topologies. (9mks)

b) Describe the following terms as used in programming

(i) Interpreter

(2mks)

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(ii) Compiler

(2mks)

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(iii) Source code

(2mks)

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