

Name.....

Index No.

School

451/1
COMPUTER STUDIES
PAPER 1
THEORY
JULY/AUGUST 2007
TIME: 2 ½ HOURS

TESO DISTRICT MOCK EXAMINATIONS - 2007
Kenya Certificate of Secondary Education (K.C.S.E)

451/1
COMPUTER STUDIES
PAPER 1
JULY/AUGUST 2007
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INSTRUCTIONS TO CANDIDATES

1. Answer ALL questions in section A
2. Answer question 16 and any other 3 in section B.
3. ALL answers to be written in the spaces provided.

This paper consists of 12 printed pages.

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

SECTION A (40 MARKS)

Attempt all questions in this section.

1. Explain the meaning of the following transmission impairments. (2mks)

a) Attenuation.

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b) Cross-talk

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2. a) Define the term file organization. (1mk)

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b) Explain two methods of file access. (2mks)

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3. List four number systems that the design and organization of a computer may depend on. (4mks)

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4. Explain the meaning of the following terms as used in computer communication (2mks)

a) Modulation

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b) Demodulation

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5. Using one's complement, calculate $11011_2 - 111_2$ and leave your answer in binary notation. (4mks)

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6. List three types of computers that are classified according to the type of signal they use when functioning. (3mks)
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7. In relation to DTP, explain the meaning of (2mks)
- a) Pasteboard
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- b) Masterpage
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8. What is the main function of a primary key in a database. (1mk)
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9. Apart from a computer, give three other elements that are needed in order to connect to the internet. (3mks)
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10. a) Define the term virtual reality. (1mk)

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b) Give three components of a virtual reality system. (3mks)

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11. Highlight any two ways in which computers are used as industrial systems. (2mks)

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12. Indicate the type of cell reference depicted by the following. (3mks)

a) \$H\$5

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b) H5

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c) H \$ 5

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13. List three components of a spreadsheet. (3mks)

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14. State two documents that are needed during the process of mail merging. (2mks)

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15. State any two components of a world wide web. (2mks)

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SECTION B (60 MARKS)

Answer questions 16 and any other three questions from this section

16. a) Define the following terms as used in programming. (2mks)

i) Assembler

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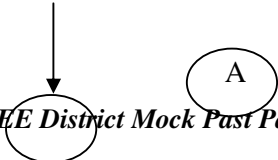
ii) Pseudo-code

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b) With the aid of flowchart segments, highlight two differences between the REPEAT...UNTIL and WHILE.....DO statement structures. (4mks)

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c) Give the name and use of the flowchart symbol below. (2mks)



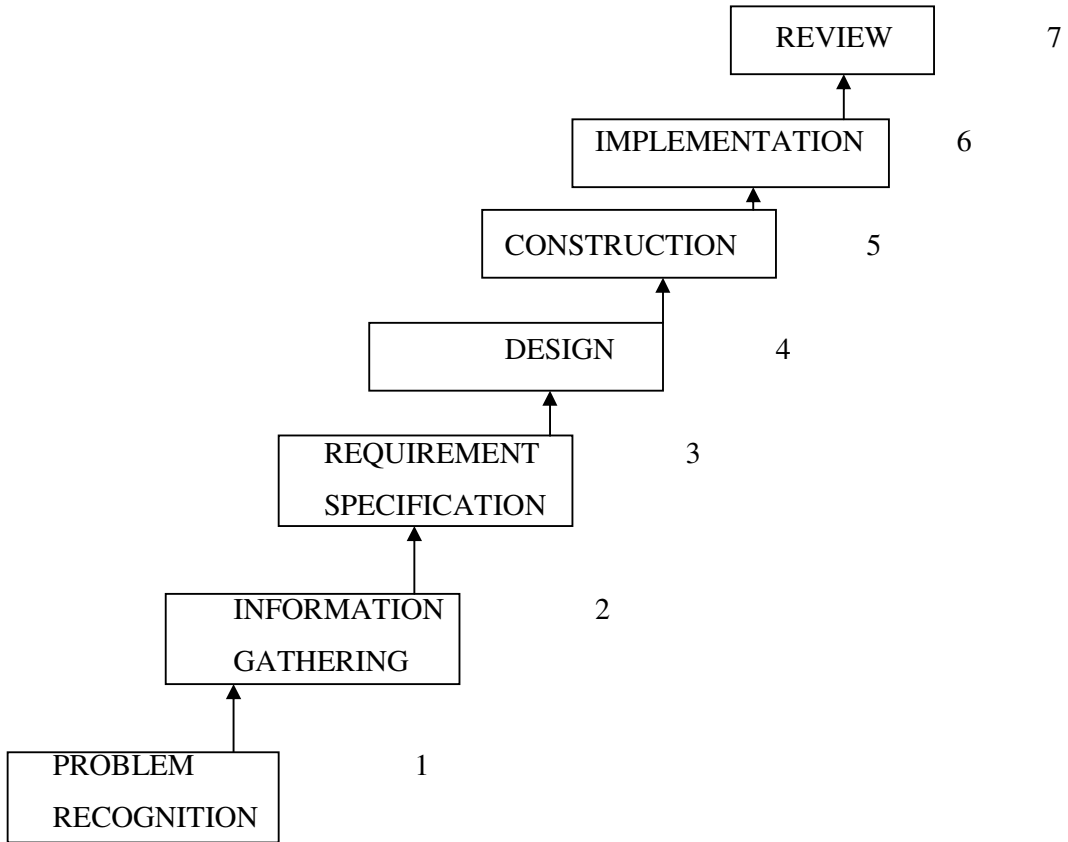
A
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i) Name

ii) Use
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d) It is required that numbers from 5 to 100 in the series 5,10,15....100 are multiplied and the product displayed. Design a flowchart for solving the problem. (7mks)

17. a) The following diagram shows the stages of developing an information system.



i) List any four methods that can be used to achieve the second stage in above. (4mks)

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ii) List any four areas that have to be designed at the fourth stage. (4mks)

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b) Explain the meaning of the following system characteristics. (4mks)

i) Entropy

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ii) Controls

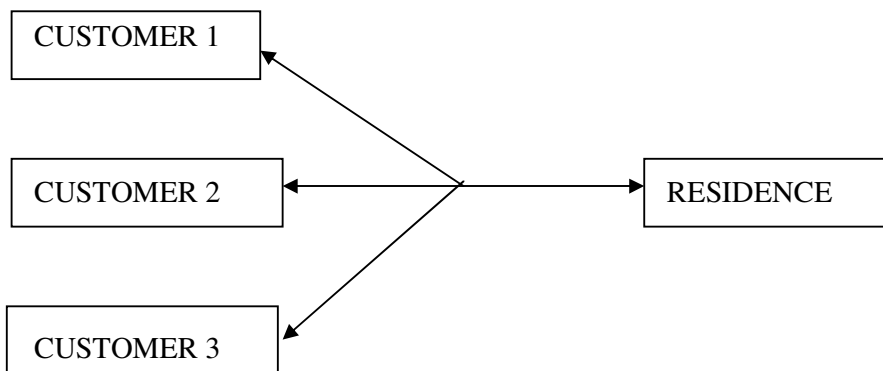
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c) State the three functions of an information system. (3mks)

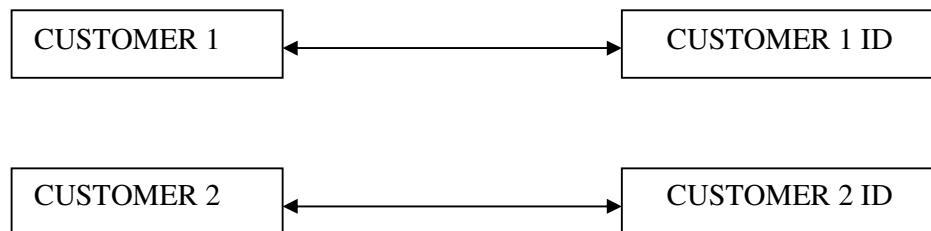
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18. The diagram below shows various entities, their attributes and the relationship among them.

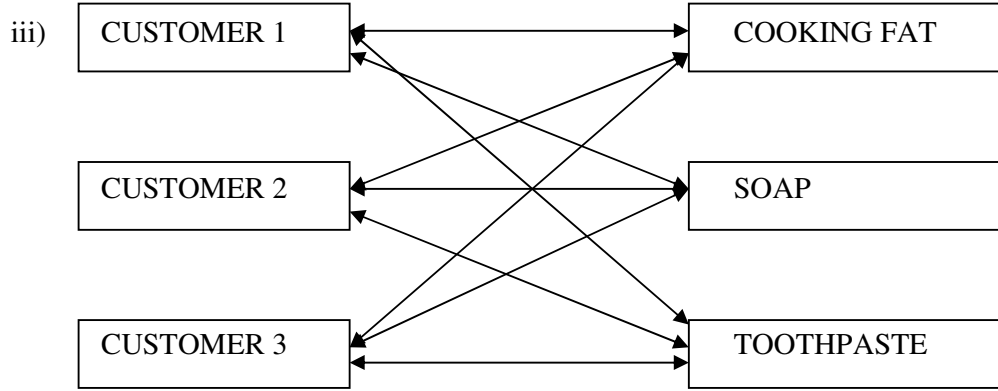
i)



ii)



CUSTOMER 3 ←————→ CUSTOMER 3 1D



a) Define the terms. (6mks)

i) Entity

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ii) Attribute

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iii) Relationship

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b) Indicate the type of relationship depicted by the diagram above. (3mks)

i)

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ii)

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iii)

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c) (a) Write the acronym DBMS in full. (1mk)

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(b) State any three functions of a DBMS. (3mks)

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d) List any three database models. (3mks)

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19. a) State three characteristics of RAM. (3mks)

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b) The capacity of a computers memory is 128MB. Calculate the maximum number of nibbles the memory can support. (4mks)

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c) List any (5mks)

(i) Three pointing input devices

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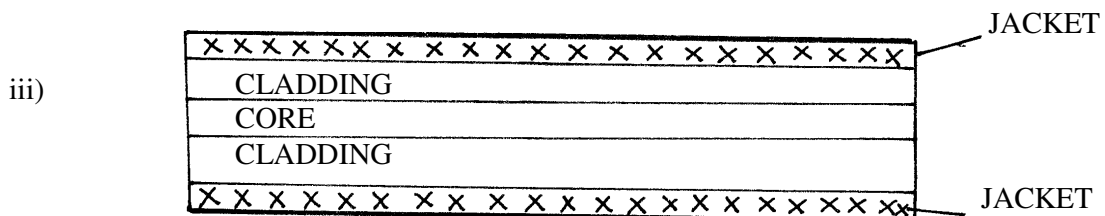
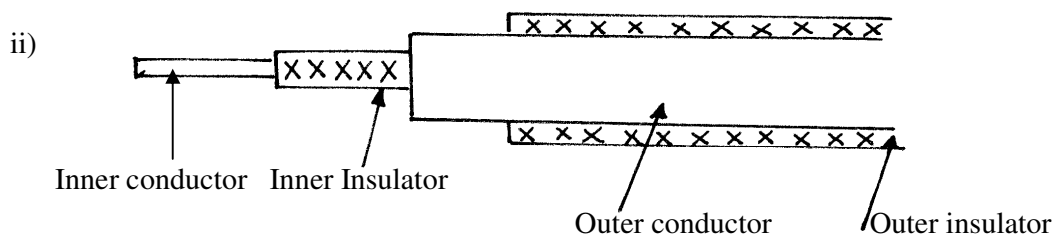
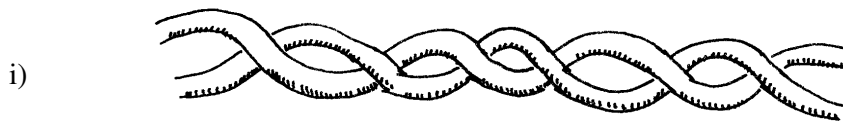
(ii) Two digitizing input devices.

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d) State any three softcopy output devices. (3mks)

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20. The following diagrams shows various transmission media for networking to computers.



a) Name the transmission media shown in the diagrams above. (3mks)

i)

ii)

iii)

b) State any two advantages of using medium (i) over medium (iii) (2mks)

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c) Explain the difference between a bridge and a gateway.

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d) Give the use of the following networking devices. (6mks)

i) Network interface card(NIC)

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ii) Router

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iii) Repeater

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iv) Explain the difference between a data Terminal Equipment (DTE) and Data Circuit – terminating Equipment (DCE) (2mks)

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END