Name…………………………………………………….…Class..…...Adm No……………

451/1
COMPUTER STUDIES
PAPER 1
(THEORY)
TERM 2- 2017-FORM 4
TIME: 2 ½ HRS
JULY 2019.

GATUNDU SOUTH JOINT EVALUATION TEST QUESTION PAPER

Instructions to candidates
1. This paper consists of TWO sections; A and B
2. Answer all questions in sections A.
3. Answer question 16 and any other THREE questions from section B.

FOR EXAMINERS USE ONLY

SECTION	QUESTION	
A	1 – 15	
B	16	
	17	
	18	
	19	
	20	

	TOTAL MARKS	

SECTION A. (40 MARKS)

Answer all questions in this section

1. State **two** characteristics of microcomputers. (2mks)

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_____

2. State the functions of the following keyboard key combinations:

   (a) CTRL + ESC: _____

   (b) ALT + F4_____

   (c) CTRL + ALT + DEL_____

3. Explain **two** ways through which data loss can be prevented on magnetic media especially hard disk. (2mks)

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4. Explain **portability** with regard to software and hardware factors to consider when selecting a computer. (2mks)

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_____

5. (a) Explain each of the following formatting features in Microsoft Word: (2mks)

Drop Cap:

_____

Subscript

_____

(b) State any **two** paragraph formatting features in Microsoft Word. (2mks)

_____

_____

6. List any **three** internet connectivity requirements. (3mks)

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7. (a) State and explain **one key** control measure against computer viruses. (2mks)

_____

_____

8. (b) State **two** control measures against an unauthorized access. (2mks)

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_____

_____

9. (a) Convert 25_{10} into its binary equivalent. (1mk)

_____

_____

_____

(b) Using two's complements work subtract 11_{10} from 9_{10}, giving your answer in binary.

(2mks)

_____

_____

_____

10. Describe Data processing cycle. (3mks)

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11. Explain each of the following programming terms. (2mks)

(a) Source code

_____

_____

(b) Translator

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12. (a) Outline **two** purposes of computer networks. (2mks)

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(b) State **one** limitation of computer networks. (1mk)

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13. List **three** career opportunities in ICT. (3mks)

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14. a) State **two** ways in which computers are used in law enforcement. (2mks)

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b) Outline **two** effects of ICT on employment. (2mks)

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15. State and explain the function of two special purpose memories. (2mks)

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Section B (60 marks)
Answer Question 16 and any other three from this section

16. (a) What is the difference between looping and selection?   (2 marks)
_____

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   (b) Name the stage of program development cycle when: (3 marks)
       (i)   A user guide would be written.
_____

       (ii)   A programmer dry-runs the code.
_____

       (iii) System charts would be drawn.
_____

   (c) Study the pseudo-code below and answer the questions that follow.

   The pseudo code is as follows
   BEGIN
   Print "enter the value of M and N";
   Read M,N
   Set l = M;
   Set y = N;
   P = y - l;
   Q = l - y;
   IF P >Q THEN;
   Set P = l;
   Set Q = y;
   ELSE
   Set P = y;
   Set Q = l;
   ENDIF
   PRINT P, Q, l, y;
   END

   (i)   State the name of the control structure shown in the flowchart.   (1 mark)
_____

_____

(ii)   Assuming the user keys in 8 and 14 when prompted to enter the values for m and N
respectively, determine the printed values of P, Q, χ and y.   (4 marks)

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(iii)   Draw a flowchart for the above pseudo-code.   (5 marks)

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17. (a) Describe **three** standard coding scheme used in computing and electronic systems.
                                                                          (3mks)

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(b) Convert the decimal number 0.5625_{10} into its binary equivalent.   (3mks)

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    (c) Convert the binary number 110.101 to its Decimal equivalent.   (3mks)

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    (d) Using **twos** Complement, perform the following binary arithmetic leaving the answer in binary notation.   (3mks)
$100101_2 - 1101_2$

_____
_____
_____
_____
_____

    (e) Other than the ring topology, describe other **three** types of topologies. (3mks)

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18. (a) One of the functions of an operating system is Job scheduling. Explain what is meant by Job Scheduling.   (2mks)
_____
_____
_____

    (b) Recently on 4th March 2013 Kenya went on election in which the results were to be transmitted electronically using mobile phones from all polling stations to the main server. But the system (Server) failed to work.
    (i) List **four** security threats that the system was prone to: (4mks)
_____

_____
_____

_____

(ii) List **four** Control measures that the IEBC should take in future to ensure secure and safe tallying of votes.   (2mks)
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(c)   The principal of Chebloch Primary School wants to acquire a new operating system for his computer. Advise him stating the advantages of graphical user interface over Command line   interface.   (2mks)
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(d) Describe the following types of errors in data processing, giving examples.
                                                                              (3mks)
 (i) **Truncated**
_____

_____

 (ii) **Transposition**
_____

_____

(iii) **Transcription**
_____

_____

(e) Explain why the processor of a microcomputer is referred to as a microprocessor.
                                                                              (2mks)
_____

_____

19. (a) List and explain the functions of two computer buses.   (2mks)
_____

_____

_____

(b) The formula = $B2 + C$4 is entered in cell C5 and then copied to D10. Write down the formula as it appears in the destination cell.   (2mks)
_____
_____

(c) State **two** reasons why smaller computers like Laptops tend to be more expensive than Desktop computers.   (2mks)
_____
_____
_____
_____

 (d) List and give examples **three** categories of post-secondary institutions where one can advance computer skills after sitting for KCSE.   (3mks)
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_____
_____

(e) List four examples of:-
        (i) Third Generation Languages.   (2mks)
_____
_____

        (ii) Object Oriented Languages.   (2mks)
_____
_____

(f) Define the term Ergonomics.   (2mks)
_____
_____

20. (a) Describe the following terms as used in relation to expert systems. (6mks)
        (i)   User interface
_____
_____

        (ii)   Knowledge base
_____
_____

(iii) Interference Engine

_____

_____

(b)   i) Explain the meaning of ISP.   (2mks)
_____

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ii) List four examples of ISPs.   (2mks)
_____

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(c) List and explain **four** services offered by the internet.   (4mks)
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(d) Give one example of Internet search engine.   (1mk)

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