

NAME..... INDEX NO.....

451/1
COMPUTER STUDIES
PAPER 1(THEORY)

CANDIDATE'S SIGN.....

DATE.....

TIME: 2½ HOURS

CENTRAL KENYA NATIONAL SCHOOLS JOINT EXAM - 2015

INSTRUCTIONS TO CANDIDATES

- Write your name and index number in the spaces provided above.
- Sign and write the date of the examination in the spaces provided above.
- Answer all the 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.

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Section	Question	Candidate's Score
A	1 – 15	
B	16	
	17	
	18	
	19	
	20	
Total Score		

*This paper consists of 13 printed pages
Candidates should check the question paper to ensure that
all the printed pages are printed as indicated and no questions are missing.*

SECTION A: (40 MARKS)

Answer all the questions in this section in the spaces provided at end of each question

1. State the function of following terms as used in word-processing. (2mks)

(a) Drop cap

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(b) Footnotes

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2. Outline **four** attributes of a good system analyst. (2mks)

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3. State **three** functions of Read-Only Memory. (3mks)

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4. Convert 57.375_{10} to binary equivalent. (2mks)

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5. A computer virus can be spread into the computers through infected external storage devices. State **four** other sources of viruses in a computer lab. (2mks)

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6. A teacher had a document of 20GB in a hard disk. He wants to transfer the document into a CD of 700MB. Determine the number of CD's he requires. (2mks)

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7. Highlight **two** advantages of using digital signals over analog signals. (2mks)

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8. (a) Differentiate between video conferencing and telecommuting. (2mks)

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(b) State any **two** devices that are needed to facilitate video conferencing. (1mk)

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9. (a) What is a template? (1mk)

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(b) State **two** reasons for the inclusion of templates in most of the software packages. (2mks)

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10. List **three** instances in which data integrity can be compromised. (3mks)

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11. State **three** factors that dictate how windows organizes information. (3mks)

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12. (a) Define computer based learning. (1mk)

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(b) State **two** advantages of computer based learning. (2mks)

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13. Explain computer based simulation, giving an area of application and an advantage for simulation program. (3mks)

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14. State any **three** ways of ensuring that the passwords remain effective as a security control measure. (3mks)

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15. Give **two** reasons why system maintenance phase is necessary in SDLC. (2mks)

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SECTION: (60 MARKS)

Answer question 16 and any other three questions from this section

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

(i) Structured programming.

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(ii) Syntax.

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(b) Write a pseudo code to give out the sum and average of the first 50 numbers in the series:
2, 4, 6, 8, 10... (5mks)

(c) Draw a program flow chart for the above case.

(6mks)

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17. (a) Covert
(i) 10111011.0111_2 to Octal. (2mks)

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- (ii) 32.46_8 to its Binary equivalent. (2mks)

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- (iii) $5E61_6$ into Octal. (2mks)

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- (b) (i) Using TWOs compliment in 8-bit notation perform the following arithmetic leaving your answer in decimal notation $13_{10} - 20_{10}$. (4mks)

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- (ii) Use one's complement to solve the following sum: $-18_{10} + 23_{10}$. (3mks)

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- (c) (i) State the purpose of the use parity bit during data transmission. (1mk)

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- (ii) State the place value of 3 in the number 436.5_8 . (1mk)

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18. (a) Using a well labelled diagram, describe and give any **one** advantage of the bus network topology. (4mks)

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(b) State any **two** applications of Bluetooth technology. (2mks)

(2mks)

(c) Briefly describe the **three** components of satellite transmission. (3mks)

(3mks)

(d) State **two** disadvantages associated with the peer-to-peer network category over client-server network. (2mks)

(2mks)

(e) Differentiate between WLAN and WPAN. (2mks)

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(f) Why are microwave antenna and aerials concave in nature? (2mks)

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19. John went to the supermarket and bought the items shown in the picture of the spreadsheet given below:

(a) What is the **reference of the active cell**? (1mk)

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(b) (i) A cell can contain a formula. Name the other **TWO** items which a cell can contain. (1mk)

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- (ii) A new employee has just joined the company and does not know the difference between a formula and a function. You are required to explain this to her in the space provided below. Support your explanation with an example of each. (3mks)

(i) Formula.

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Example:

(ii) Function.

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Example:

20. (a) The following are some of the phases in the system development life cycle (SDLC): system analysis, system design, system implementation, system review and maintenance. State **three** activities that take place during system implementation. (3mks)

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- (b) The main interest from a system is information (output). The output is usually in the form of reports i.e. either in the form of hardcopy or softcopy. Outline **four** factors that should be considered when designing an output. (4mks)

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