

Name..... Index Number...../  
 COMPUTER STUDIES Candidates signature.....  
 451/1 Date.....  
 PAPER 1  
 TIME 2 ½ Hours

## TARGETER K.C.S.E TRACKER 2016

### SECONDARY EXAMS

FORM 3

COMPUTER STUDIES

Paper 1

2 ½ hours

#### INSTRUCTIONS TO CANDIDATES

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.

All answers must be written in English.

#### For Official Use Only

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

*This paper consists of 10 printed pages  
 Candidates should check the question paper to ensure that all  
 the pages are printed as indicated and no questions are missing.*

**SECTION A (40 Marks)**

Answer **all** questions in this section

- 1. Explain why an intranet is a more secure way to share files within an organization compared to the internet. (2 marks)

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- 2. Distinguish between a formula and a function as used in spreadsheets. (2 marks)

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- 3. Differentiate between hardware portability and software portability. (2 marks).

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- 4. State two benefits and two disadvantages that the employer will get by allowing his worker to do the office work through telecommuting. (4 marks)

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.....

- 5. Give other names for the following. (3 marks)

(a) Microcomputer

(b) Hardcopy

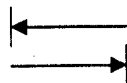
(c) Primary Memory

- 6. (a) Explain the difference between the function of the following keys (4 marks)

i) Delete and Backspace.

ii) Home and end keys

- 7. Name and explain the function of the keyboard keys represented by the following symbols. (3 marks)



8. (a) What is a computer Bus? (1 mark)

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.....

(b) State two differences between address bus and data bus. (2 marks)

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9. State two possible causes of loss of programs and data in a computer. State a suitable precaution for each cause you have stated. (2 marks)

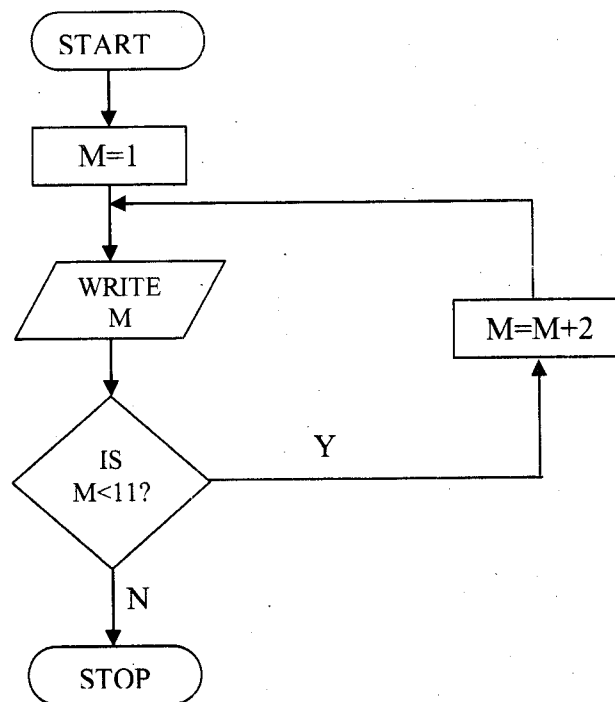
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10. Explain the following as used in spreadsheet. (2 marks)

(a) Absolute cell referencing

(b) Relative cell referencing

11. Use the flowchart below to answer the questions that follow:-



(i) Dry run the flowchart and list down the outputs. (2 marks)

(ii) Interpret the results in (i) above.

(1 mark)

12. What does the term Volatile mean in Computer Studies?

(2 marks)

13. (a) Define a word-processor giving an example.

(2 marks)

(b) Explain the term word wrap as used in word-processing.

(1 mark)

14. Differentiate between Primary memory and Secondary memory.

(2 marks)

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.....

15. Write the following abbreviations in full.

(3 marks)

(i) EBCDIC

(ii) OMR

(iii) PROM

**SECTION B (60 marks)**

Answer question **16** and any other **three** questions from this section.

16. The roots of the quadratic equation  $ax^2 + bx + c$  are given by the formula

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

where  $a \neq 0$  and if  $b^2 - 4ac$  is negative then we have Complex Roots

(a) Draw a flowchart for the formula.

(6 marks)

(b) Write a pseudo code for the flowchart above (5 marks)

(c) Distinguish between the following.

(4 marks)

(i) Compiler and Interpreter

(ii) Assembler and Assembly language

17. (b) Study the spreadsheet below and answer the questions that follow:-

	A	B	C
<b>1</b>	<b>NAIROBI STATIONERS</b>		
<b>2</b>	<b>Book Title</b>	<b>Price per Book</b>	<b>No. of Books Bought</b>
<b>3</b>	Data Processing	300	45
<b>4</b>	Teach Yourself Computers	400	30
<b>5</b>	The Internet	550	7
<b>6</b>	Computer Studies Book 1	450	26
<b>7</b>	Lotus 123	350	8
<b>8</b>	Word-Perfect for Windows	250	6
<b>9</b>			
<b>10</b>			

- (a) Write down the data item stored in cell B7 (1 mark)
- (b) Write down the formula that can be used to determine the total sales for the book titled "Data Processing" (1 mark)
- (c) Write down the function that can be used to determine the total number of books sold. (1 marks)
- (d) Write down the function that can be used to determine the price of the most costly book. (2 marks)
- (c) State the purpose of the following in database design. (3 marks)
- i) Default value
  - ii) Input mask
  - iii) Field size

(d) Piracy of software is on increase. State two measures that the government can put in place to control it. (2 marks)

(e) Explain the meaning of the following considerations which are made before installing and operating system. (3 marks)

i) Hard disk capacity

ii) Processor specification

iii) Monitor resolution

(f) State two negative impact of social media in our society today. (2 marks)

18. (a) Explain the following aspects in computer technology. (4 marks)

(i) Freeware

(ii) Firmware

(iii) Defragmentation

(iv) Computer Hacker

(b) Differentiate between safety precautions and practices in a computer lab giving an example in each case (4 marks)

(c) State three things that should be done in case of a fire outbreak in a computer lab. (3 marks)

(d) State two things that must be done before shutting down a computer. (2 marks)

(e) Give another name for: (2 marks)

i) Enter key

ii) Batch processing

19. (a) Define the following terms. (3 marks)

(i) Power backup

(ii) Anti glare screen

(iii) Burglar proofing

(b) State four typing guidelines that should be observed when learning typing. (4 marks)

(c) Explain briefly the following computer processing files. (3 marks)

(i) Transaction file

(ii) Report file



(iii) Reference file

4) Explain briefly the following electronic data processing modes (3 marks)

(i) On-line processing

(ii) Batch processing

(iii) Real time processing

(e) Distinguish between sequential file organisation and random file organisation. (2 marks)

20. (a) Perform the following binary arithmetic. (2 marks)

$$\begin{array}{r} 101101 \\ + 100110 \\ \hline \hline \end{array}$$

(b)

$$\begin{array}{r} 10101 \\ - 1011 \\ \hline \hline \end{array}$$

(b) Convert the following binary number to octal given that the left most digit is a sign bit (2 marks)

0111011010<sub>2</sub>

b) Convert 19.88 to binary notation (3 marks)

c) Convert 450<sub>10</sub> to octal. (2 marks)

d) Convert A46H to binary.

(3 marks)

e) Using twos complement, subtract  $13_{10}$  from  $17_{10}$

(3 marks)

f) State any two coding schemes that you know.

(2 marks)