

Name..... Index No.....  
School..... Candidates Signature .....  
Date.....

**MAGS TWO CYCLE SEVEN JOINT EXAMINATION**

*Kenya Certificate of Secondary Education (K.C.S.E)*

451/1  
COMPUTER STUDIES  
PAPER 1  
(Theory)  
JAN/APRIL 2020  
TIME: 2 ½ HOURS

**Instructions to candidates**

- Write your name and Index No in the spaces provided above.
- Sign and Write the date of the examination in the spaces provided above.
- This paper consists of two sections: A and B
- Answer all the questions in section A
- Answer question 16 and any other three questions from section B
- All answers must be written in the spaces provided on the question paper.

**For Examiner’s Use Only**

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

1. Identify three advantages of using computers in banking (3mks)

2. List three facilities that will ensure proper ventilation in a computer lab (3mks)

3. Give two main functions of a computer input device. (2mks)

4. What are turnaround documents? (1mk)

5. Using examples, distinguished between:

(i) Primary and secondary storage (1mk)

(ii) Fixed and removable disks (1mk)

6. Ann connected new multimedia speakers to her computer and tried to play her favorite music CD, but no sound came out. Suggest two problems that might have occurred (2mks)

7. Explain the following considerations when purchasing software (2mks)

(i) Authenticity

(ii) Portability

8. Give three ways in which operating systems are classified into (3mks)

9. Peter tried to retrieve a document file following all the steps correctly. The filename did not appear in file list box. State three causes for this. (3mks)

10. State the use of the following objects in databases. (3mks)

i) Tables

ii) Forms

iii) Query

11. i. Explain the meaning of the following as used in computer programming. (2mks)

a. Syntax

b. Semantic

ii. List three ways in which data integrity can be compromised. (3mks)

12. i. Mobile phones have become common ICT devices. Explain some of the powerful capabilities that come with some of the latest embedded operating systems (3mks)

ii. List two disadvantages of fiber optic cable over twisted wires. (2mks)

13. Describe any two types of data processing methods. (2mks)

14. State two advantages of USB port over the parallel port (2mks)

15. Differentiate between the terms signal Attenuation and Noise as used in data communication. (2mks)

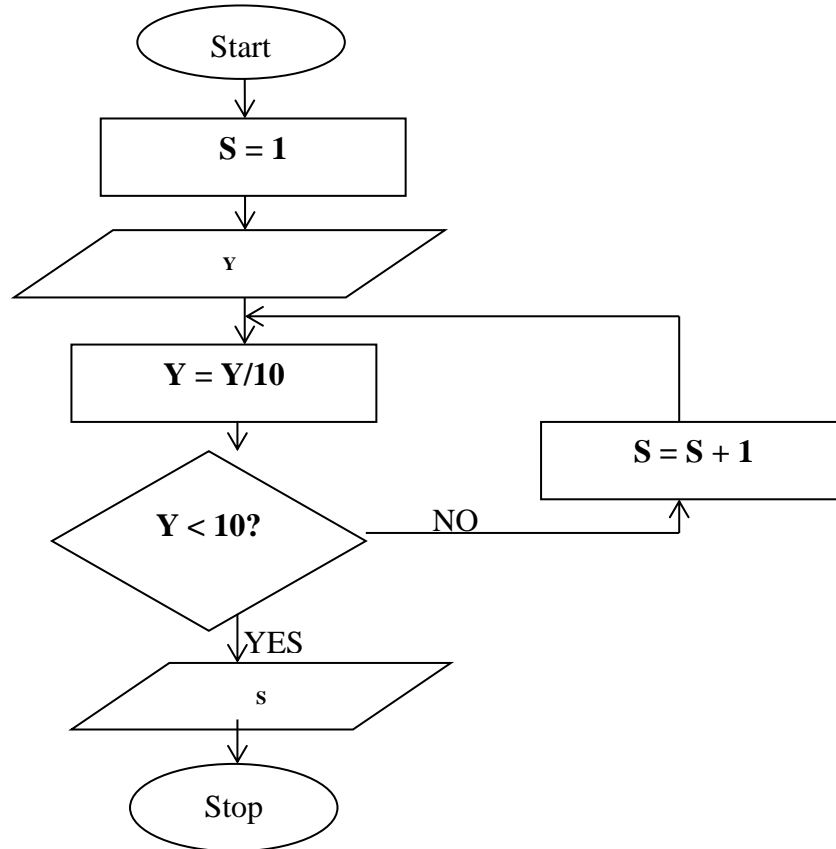
SECTION B

*Answer question 16 and any other three questions in this section*

16. a) State three advantages of low -level languages (3mks)

b) Give two differences between a compiler and an interpreter. (2mks)

c) i) Study this flowchart and use it to answer the questions that follow.



I. Give the expected output from the flowchart when the value of Y is:

(i) 48

(1 marks)

(ii) 9170

(2 marks)

(iii) – 800

(2 marks)

II. Write the pseudo code that can be used to create a program represented by the above Flowchart.

17. a. Use two complement to perform the following arithmetic operations

i)  $15_{10} - 12_{10}$

(4mks)

ii)  $10111_2 - 1011_2$

(3mks)

b)  $1011_2$  is a ones complement binary representation of negative number using four bits work out the likely positive equivalent in base 10. (4mks)

c) Convert the decimal fraction  $10.375_{10}$  into its binary equivalent (3mks)  
Whole numbers

d) Assuming the existence of base five, list the numbers used in the number system (1mk)

18. a) State and explain two disadvantages that will come about if a network was to be installed in your school. (4mks)



b) Discuss two disadvantages of wireless networks. (4mks)

c) Write the following abbreviation in full. (2mks)

i) F.T.P

ii) H.T.T.P

d) With the aid of a diagram, discuss Hybrid topology. (4mks)

e) Discuss four advantages of network. (2mks)

19. a) Explain why a computer is able to display the correct time and date when it has just been switched on. (2mks)

- b) Discuss two types of special memories found in a Computer System. (4mks)
- c) i) Define a Bus with reference to a computer system. (1mk)
- ii) List two examples of buses. (2mks)
- d) Distinguish between a power cable and interface cable. (2mks)
- e) Differentiate between the different types of RAM. (4mks)
20. a) i) Define a system. (1mk)
- ii) Explain system entropy. (2mks)
- b) State three circumstances that can lead to development of information systems (3mks)

- c) Distinguish parallel changes over from straight change over as used in system implementation. (2mks)
  
- d) Discuss two fact finding methods. (4mks)
  
- e) Differentiate an open system from a closed system. (2mks)
  
- f) List two responsibilities of a system analyst. (2mks)