FORM FOUR KCSE 2018

COMPUTER PAPER 1 QUESTIONS

1. State two reasons for the increased use of laptop computers in government offices. (2 marks)

2. Computer network technicians prefer to use command-line based operating system when configuring networks. State three reasons for the preference. (3 marks)

3. State three measures that should be put in place in a computer laboratory to safeguard users' health. (3 marks)

4. State three ways in which barcode readers may be used in schools.(3 marks)

5. State three advantage of flat panel monitors over cathode ray tube monitors as used in computers. (3 marks)

6. State three possible reasons for the extinction of daisy wheel printers in the market. (3 marks)

7. State three ways in which an operating system secures a computer system. (3 mark)

8. A law firm prefers to use hard copy output over soft copy output when handling documents for legal matters. State two reasons for this preference. (2 marks)

9. State the function of each of the following features in a word processor application: (a) Thesaurus;(1 marks)(b) Comments.(1 marks)

10. With the aid of an example, explain the term multi-level list as used in word processing. (3 marks)

11. Distinguish between real-time operating system and distributed operating system. (3 marks)

12. Explain the function of protect sheet feature in a spreadsheet program. (2 marks)

13. State four computer-based careers introduced as a result of computerised data processing method at the airport. (2 marks)

14. In a spreadsheet, the formula =If(A1>10, A1*77, A1*50) is entered in a cell. Interpret the results. (3 marks)

15. State a stage in systems development life cycle where each of the following activities are carried out:

(a) identifying the technologies that may be used in a proposed system; (1 mark)

(b) identifying shortcomings of a system; (1 mark)

(c) preparing the system migration plan.(1 marks)

. **SECTION B (60 marks)**

Answer question 16 and any other three questions from this section in the spaces provided.

16. (a) With the aid of a flow chart, describe a loop control structure as used in programming.(4 marks)

(b) Study the following pseudocode and answer the questions that follow.

1. Start

2. Get value l and value2

3. If value I > value2 Then

4. Maximum = valuel

5. Else If value l < value2 Then

6. Maximum = value2

8. Else Go to 9

9. Display Maximum

10. Stop

(i) State the purpose of the pseudocode.(1 mark)

(ii) Draw a flowchart equivalent to the pseudocode. (6 marks)

(c) Distinguish between a source program and a compiler as used in computer programming.(4 marks)

17. (a) (i) Explain the term search engine as used in the Internet.(2 marks)

(ii) Peter intends to download a movie from the Internet.

State the three factors that may determine the total time taken to complete the download. (3 marks)

(b) Wakulima online is an organisation that runs a web based system for assisting farmers to obtain market for their farm produce.

State four technological reasons that may cause a farmer not to access the organisation's system. (4 marks)

(c) Explain a situation when each of the following Desktop Publishing program features may be used when creating a publication:

(i) cropping;(2 marks)

(ii) transparency.(2 marks)

(d) List two areas where infrared waves are used in data communication.(2 marks)

18. (a) State four activities of the planning stage of systems development. (4 marks)

(b) Explain a circumstance when each of the following feasibility studies are carried out during systems development:

(i) Technical;(2 marks)

(ii) Economic;(2 marks)

(iii) Schedule.(2 marks)

(c) Table 1 and Table 2 are related tables in a database. Use them to answer the questions that follow.

Table 1

Dept Code	*Dept Name*
001	Computer
002	Aviation
003	Engineering

Table 2

Dept ID	**St***udents Registration No.*	***Students Name***
002	st1	Alex Toro
003	st2	Naomi Komi
002	st3	Peter Kengo

(i) Identify the appropriate primary key for each table. (1 mark)

(iii) Explain two benefits of enforcing referential integrity in the database. (4 marks)

19. (a) Describe each of the following validation checks as used in data processing:

(i) Preserve check;(2 marks)

(ii) Data type check;(2 marks)

(iii) Check digit.(2 marks)

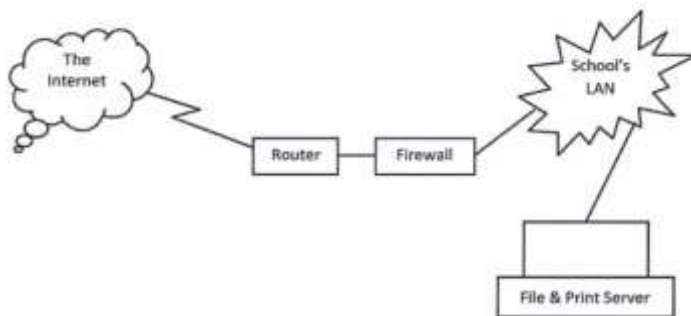(b) Write each of the following abbreviations in full:

(i) BCD;(1 marks)

(ii) EBCD;(1 marks)

(iii) ASCII.(1 mark)

(c) Using 10 — bits binary number system, perform the following decimal operation using two's complement (6 marks)

129_{10} 128_{10}

20. (a) The figure shows a network design. Use it to answer the questions that follow.

(i) Explain the function of each of the following in the network. I Router;

II Firewall;(2 marks)III File server.(2 marks)

(ii) State two categories of software that must be installed in a computer so that users can use it to access the internet. (2 marks)

(b) State four ways in which computers may be used to manage data in a research environment.(4 marks)

(c) Some computer companies have opted to use the Internet to provide shared processing resources and online application services to users.

State three advantages that this approach will have on their customers. (3 marks)