

COMPUTER STUDIES  
PAPER 1  
July/August 2008

**LARGER BUNGOMA DISTRICT MOCK EXAMINATION**  
**Kenya Certificate of Secondary Education 2008**

**MARKING SCHEME**

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**SECTION A 40 MARKS!**

1. State one main reason why typing tutor is recommended to be used by computer students (1 mark)

**Improve Speed**  
**Improve Accuracy**

2. Give three main ways of classifying computers. (1 ½ marks)

**Physical size**  
**Functionality-not function**  
**Purpose**

3. Peter was sent to buy computers for the students' laboratory. He was supposed to take into account the following factors.

- Processor speed
- Memory capacity
- Compatibility

Give three main reasons for taking into account the above factors( 3 marks)

- **Processor speed determines the kind of programs to install, if it is fast multitasking can be possible, bigger programs can be executes with ease**
- **Memory is important when looking at king of programs to installed, the speed of the computer; it can be slow because of swapping if the memory is low.**
- **Compatibility is important since it would influence the future upgrading of the same computer or using the existing software and hardware. ,**

4. Basic computer setup and cabling is a very important concept to be taught in a computer class. Give two reason to support the above concept. (2 mark)

- **Improper set up can lead to spoiling the computer and at times crushing the whole system.**
- **Improper starting up and shutting down can lead to crushing of the hard disk.**

5. State any two factors to be considered when selecting hard copy output devices.(2 marks)

- **The quality of output**
- **The speed**
- **Compatibility**

6. State four benefits of using a computer in a school store. (2 marks)

- **For accurate inventory control**
- **Easier determination of reorder level**
- **Easier and faster retrieval of records**

7. Define the following terms as used in word processing (4 marks)

a) Pagination

- **Page numbering style e.g x of y**

b) Moving-

- **Changing the position of text**

- c) Indenting
- **Moving the text from the margin**

d) margins

- **Page margins are the blank space around the edges of the page**

8. You have been asked to change your password .state a precaution you need to take in order to avoid each of the following.( 2 marks)

a) Piracy

- **Hiding-use of file attribute**

b) Forgetting the password

- **use simple password**

9.

a. State two advantages of using a questionnaire for gathering information. (2 marks)

- **Since they are filled and returned in privacy, more sincere responses are possible**
- **The respondents can fill the questionnaire at their own pace.**

b. Give three factors to consider when designing the output in program development. (1 marks)

- **The target audience**
- **The frequency of report generation**
- **Quality and format**

10. a) Differentiate between pure binary and BCD code as used in data representational mark)

- **in pure binary the whole number is converted into binary while in BCD code each individual digit is converted into binary represented using 4 bits**

b) Convert  $2D16_{16}$  directly to binary.(2 marks)

<b>2</b>	<b>D</b>	<b>1</b>	<b>6</b>
<b>0010</b>	<b>1011</b>	<b>0001</b>	<b>0110</b>

$$2D16_{16} = 0010101100010110_2$$

11. State the stages of system development in their logical sequence (3 ½ marks)

- Problem recognition and definition**
- Information gathering**
- Requirement specification**
- System design**
- System construction**
- System implementation**
- System review and maintenance.**

- **Each half a mark in their logical sequence**

12. Explain any two cultural effects as a result of use of ICT. (4 marks)

- computer crimes**

**b. Moral effects.****Stating and explaining**

13. Name three responsibilities that are carried out by network support professionals. (3 marks)

- a. **Managing network**
- b. **Provide help to users**
- c. **Support the development**
- d. **Planning, scheduling and implementing network hardware and software.**

14. Give three software requirements mandatory in a computer lab. (3 mark)

- **the operating system should be graphic user interface(GUI)**
- **software for application packages may also be graphic user interface based which support the use of pointing devices**
- **an up to date anti-virus recommended.**

15. A school intends to set-up e-mail. List 4 activities likely to be provided by mails e-mail facility.

(2mks)

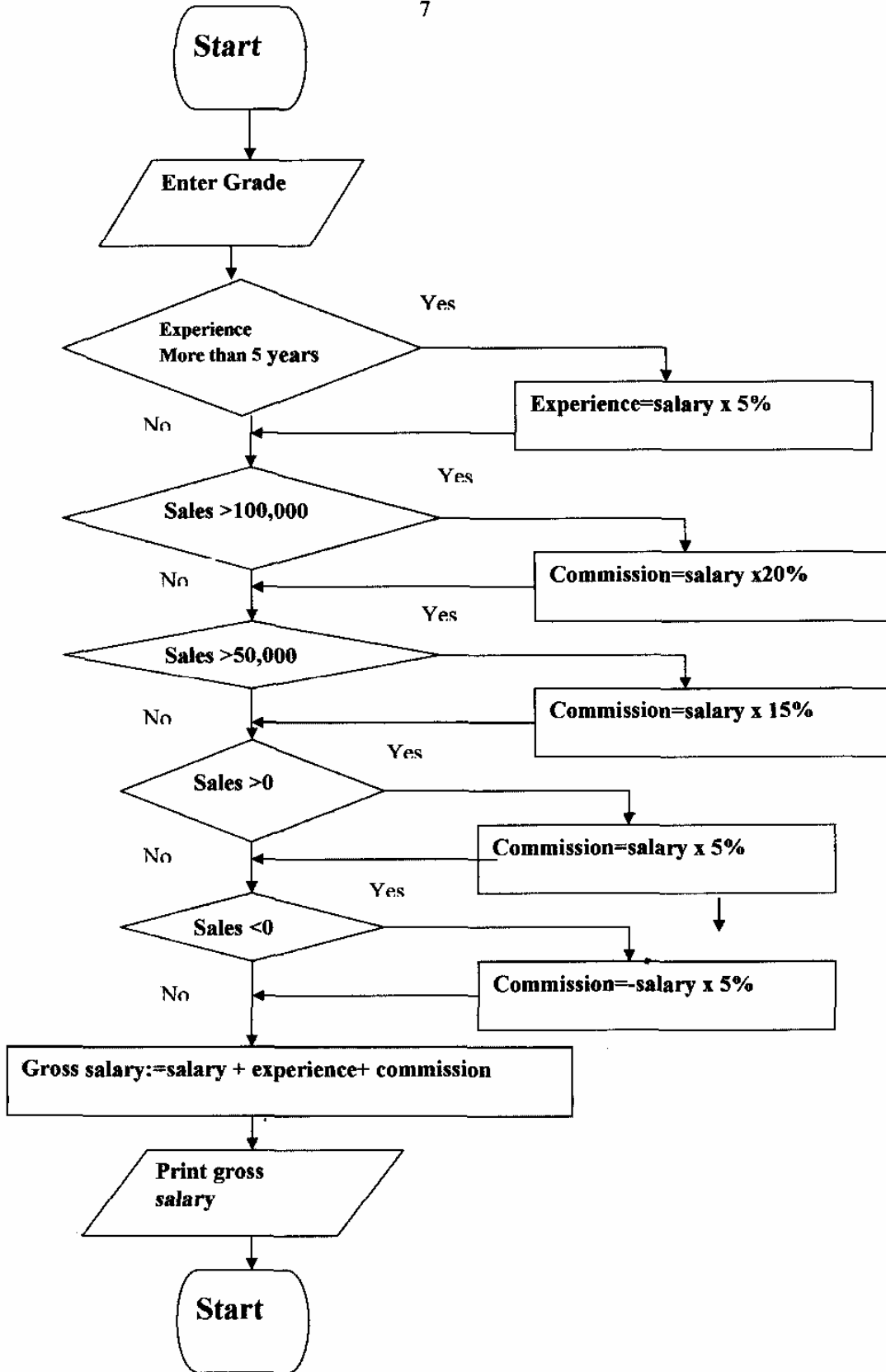
- **checking mail,**
- **composing mail,**
- **forwarding mail,**
- **sending mail,**
- **saving mail**
- **printing mail**

**SECTION B (60 MARKS)**

16. The gross salary of employees of **Becam Technology Centre** is based on basic salary; the basic salary is based on grade and additional benefits as follows, a. Employees who have worked for more than 5 years receive an additional pay of 5 % to their basic salary, b. Monthly commissions are based on monthly sale of computers and accessories profits as follows

Monthly sales Profit	Commission Rate (%)
Above 100,000	20
Between 50,000 and 100,000	15
Between 0 and 50,000	5
Below 0	Deduction 5% from their basic.

(a). Draw a flow chart that would be used to calculate the gross salary. (14 marks)



17. a) define the following terms as used in spreadsheet (4 marks)
- i. **absolute referencing-this are cell referencing that always refers to specific location of a work sheet if copied from one cell to another**
  - ii. **Value this are numbers that can be manipulated mathematically**
  - iii. **Worksheet-consists of cells ,rows columns**
  - iv. **Workbook—consists of worksheets.**
- (b) State 6 advantages of using spreadsheet over manual spreadsheets (6 mark)
- **it utilizes powerful aspect of computer kike speed, accuracy and efficiency**
  - **Has larger virtual sheet for data entry and manipulation.**
  - **Large storage space**
  - **Neat work**
  - **Inbuilt formulae**
  - **Better formatting capabilities.**
- c. Name four types of database models (2 marks)
- **Flat file**
  - **Network**
  - **Hierarchical**
  - **relational**
- ii) c. give three parts of a report layout in design view.(3 marks)
- **Report header**
  - **Page header**
  - **Details**
  - **Page footer**
  - **Report Footer**
18. State three major types of Networks.. (3 marks)
- **LAN**
  - **WAN**
  - **MAN**
- (b) Give the fill forms of the following acronyms (2 marks)
- (i) UTP - **unshielded twisted pair**
  - (ii) BNC - **Bayone-Neill-Concelman**
  - (iii) RJ-45 - **Registered jack with 45 pins**
  - (iv) EMI - **Electromagnetic Interference**
- (c) (i) list 5 advantages of fiber optic cables. (5 marks)
- **There is no electro magnetic interference immune to effects of moisture and lighting.**
  - **Can transmit over along distance than coaxial and twisted paire.**
  - **Flexibility in size and weight**
  - **Security-more secure**
  - **Data transmitted digitally**
  - **Low transmission loss**

(ii) list two disadvantages of fiber optics( 2 marks)

- **they are expensive and difficult to work with**
- **they are more fragile and difficult to split**
- **they have a limited physical arc of cable**
- **they are difficult to fix**

(a) state 3 types of hubs( 3marks)

**(i) Passive hubs**

**(ii) intelligent hubs**

**(iii) active hubs**

19.(a) Describe three different ways a computer may store negative numbers. ( 6 marks )

- **Sign and Magnitude - leading zero indicates positive number and a leading one indicates the number is negative**
- **Ones complement - the binary number is inverted i.e. the ones become zeros and the zeros become ones.**
- **Twos Complement - the binary number is converted first to ones complement and then a one is added to the final answer.**

b) Give the acronym name for the following ( 3 marks)

**i) BCD - Binary Coded Decimal**

**ii) ASCII - American Standard Code for Information Interchange**

**iii) EBCDIC - Extended Binary Coded Decimal Interchange Code**

c) State and describe any two areas of Artificial Intelligence (2 marks)

- i. Robotics - Automatic device that performs functions ordinarily ascribed to human beings or that operates with what appears to be almost human intelligence,**
- ii. Natural Language processing - the goal is to make a computer to communicate with a user in the user's native language e.g. English.**
- iii. Expert Systems - A software consisting of knowledge & rules gathered from human experts in a particular field**

d) What is Virtual reality? (1 mark)

**The ability of a computer to create a real life scenario from software as it interacts with the user such that to the user the environment created seems real**

e) List three components of a Virtual reality gear. (3 marks)

- **Head mounted Display (Visor)**
- **Gloves**
- **Body Suite**

20. a) Define the term operating system (1mark)

- **a suite of programs that manage the computer resources such as I/O transfers, memory management and CPU time.**

b) Describe any four functions of the operating system

(4marks)

- **Memory management**
- **Job scheduling**
- **Processor management**
- **Peripheral control**
- **Error reporting**
- **File management**
- **Logging and accounting**

(c). Explain how one can manage his/her disks using windows. (6 marks)

- **Formatting disks**
- **Scanning a storage devices for problems**
- **Using disk defragmenter to rearrange storage media contents**
- **Compressing the storage media**
- **Backing up data**
- **Partitioning a disk**

(d). Explain with the use of Dos how one can create a text file in C: called John, with text Welcome Home. (4 marks)

- **Change directory to c:- cd\**
- **Copy con John**  
**Welcome Home**  
**Press control z**
- **Then a file will be created**