

## GUIDE

**840/1**  
**COMPUTER STUDIES**  
**Paper 1**  
**Jul./Aug. 2011**  
2½ hours

### UMTA JOINT MOCK EXAMINATIONS BOARD

#### Uganda Certificate of Education

#### COMPUTER STUDIES

#### Paper 1(GUIDE)

2 hours 30 Minutes

#### INSTRUCTIONS TO CANDIDATES:

*Write your name, signature, centre and index number in the spaces above.*

*This Paper consists of **three** sections, **A**, **B** and **C**.*

*Section **A** contains **20 compulsory** objective-type questions. The correct alternative **A**, **B**, **C** or **D** must be written in the box provided on the right hand side of each question.*

*Section **B** contains **six compulsory** structured questions.*

*Answers to section **B** must be written in the spaces provided in the question paper.*

*Section **C** contains **three** essay type questions. Answer only **one**. Answers to section **C** must be written in the answer booklet provided.*

#### For Examiners' Use only

MCQ	Q21	Q22	Q23	Q24	Q25	Q26	Q27	Q28	Q29	TOTAL

**SECTION A: (20 MARKS)**

*Answer **all** questions in this section..*

1) . This Key Uniquely Identifies Each Record

- A) Primary Key
- B) Key Record
- C) Unique Key
- D) Field Name

A

2) What method can you use to add a new table to your database?

- A) Use Design View to create a table
- B) Enter data directly by using a datasheet
- C) Both of above
- D) None of the above

C

3) The Fill/Back Color button on the formatting toolbar applies color to:

- A) The border for the selected control
- B) The text in the selected control
- C) All aspects of the control
- D) The background of the selected control

D

4) Which of the following is not a valid Zoom percentage in Excel?

- A) 10
- B) 100
- C) 300
- D) 500

D

5) What is entered by the function =today()

- A) The date value for the day according to system clock
- B) The time value according to system clock
- C) Today's date as Text format
- D) All of above

A

6) What is an expression that tells how the numbers in a determined set of cells are to be calculated?

- A) Formula
- B) Field
- C) Data
- D) Query Correct Answer:

A

7) ALU is

- A) Arithmetic Logic Unit
- B) Array Logic Unit
- C) Application Logic Unit
- D) None of above

A

8) Chief component of first generation computer was

- A) Transistors
- B) Vacuum Tubes and Valves
- C) Integrated Circuits
- D) None of above

B

9) To produce high quality graphics (hardcopy) in color, you would want to use a/n

- A) RGB monitor
- B) Plotter
- C) Ink-jet printer
- D) Laser printer

C

10) The silicon chips used for data processing are called

- A) RAM chips
- B) ROM chips
- C) Micro processors
- D) PROM chips

C

11). A factor which would strongly influence a business person to adopt a computer is its

- A) Accuracy
- B) Reliability
- C) Speed
- D) All of above

D

12) Which of the following terms is the most closely related to main memory?

- A) Non volatile
- B) Permanent
- C) Control unit
- D) Temporary

D

13) What happens if you press Ctrl + Shift + F8?

- A) It activates extended selection
- B) It activates the rectangular selection
- C) It selects the paragraph on which the insertion line is.
- D) None of above

B

14) What is a slide-title master pair?

- A) The title area and text area of a specific slide
- B) a slide master and title master merged into a single slide
- C) A slide master and title master for a specific design template
- D) All of above

C

15) Special effects used to introduce slides in a presentation are called

- A) effects
- B) custom animations
- C) transitions
- D) present animations

C

16) Which one of the following is an input device?

- A) Scanner
- B) Printer.
- C) Loudspeaker.
- D) Plotter.

A

17) How many bytes do 4 Kilobytes represent?

- A) 512.
- B) 1024.
- C) 4096.
- D) 8192.

C

18) Back up of the data files will help to prevent

- A) loss of confidentiality
- B) duplication of data
- C) virus infection
- D) loss of data.

D

19) Automated transactions for the purchase of goods over the Internet is called

- A) E-shopping
- B) Web purchase
- C) E-commerce
- D) Web shopping.

C

20) Output which is made up of pictures, sound and video is BEST described as

- A) graphics
- B) multimedia
- C) hard copy
- D) multi aspect.

B

### SECTION B (60 MARKS)

*Answer **all** questions in this section. All the working **must** be done in the spaces provided.*

21 (a) Define the term 'Artificial Intelligence' as applied to computers. (1 mark)

- This is the ability of computers to behave and work like humans.
- Development of computer systems able to perform tasks that normally require human intelligence, such as visual perception, speech recognition, decision-making, and translation between languages.

(b) State any **four** precautions that should be taken to ensure safety in a computing environment?

- Install fire extinguishers.
- Use of passwords to protect against illegal access to data.
- Use of antivirus programs and firewalls to prevent malware.
- Avoiding drinks and foods into the computing environment.
- Putting burglar proofs, metallic doors and windows.
- Proper ventilation.
- Stable power backups.

(c) Write the following abbreviations in full?

(i) ASCII,

American Standard code for Information Interchange.

(ii) EBCDIC

Extended Binary Coded Decimal Interchange Code.

(d) List any 3 (three) types of microcomputers computers.

- Laptops.

- Palmtops/PDAs
- Desktops.

22(a) Define the term **Computer Generation**. (1 mark)

These are stages of development of computers.e.g. The first, second, third, fourth, and fifth generation.

(b)List one major development of computers in: (3 marks)

- (i) Second Generation: Transistors.
- (ii)Third Generation: Integrated Circuits.
- (iii)Fourth Generation: Microprocessors.

(c) (i) Give any 2 (two) examples of first generation computers. (2 marks)

- UNIVAC.
- EDVAC
- ENIAC
- Abacus
- Mechanical calculator

(d)Outline and four setbacks (demerits) of first generation computers. (4 marks)

- Consumed great amounts of power.
- Were slow in processing(low speeds)
- Had little memory.
- Were not flexible (were very large in size).
- Required a number of people to be operated.
- Required great training before their usage.
- Very expensive to buy and maintain.

23. (a) Describe any **three** characteristics of computer software. (3 marks)

- Has to be documented (user manual).
- Compatibility and system configuration.
- Portability.
- User friendliness.
- User needs. (Software has to meet the need it is designed for).

(c) With examples, mention the three types of system software. (2 marks)

- i. Operating systems (Windows, Linux, MacOS).
- ii. Utilities (Antivirus software, File viewers, Sort utility, File compression).
- iii. Language Translators (FORTRAN,ALGOL,PASCAL)

- (d) (i) What is a computer virus? (1 marks)
- A malicious program designed to cause damage to the normal behaviour of a computer system.

- (ii) List 2 ways through which computer viruses are spread (2 marks)
- Network sharing.
  - Use of Infected diskettes.
  - Downloading freeware and shareware.

- (iii) Describe any **two** types of computer viruses: (2 marks)
- Trojan horse.
  - Worms.
  - Time bombs.

- (24) (a) Give any **two** examples of database management software you know. (2 Marks)

- Oracle.
- Microsoft Access.
- PostgreSQL.
- SQL server.
- dBASE.
- FoxPro.

- (a) Distinguish between a **field** and a **record** as used in databases. (4 Marks)

A field.

- Vertically arranged data in a table with a similar data type.

Record.

- An entry in a table.
- A group of related data about an item treated as a single group.

- (b) State the use of the following data types as used in database management software. (4 Marks)

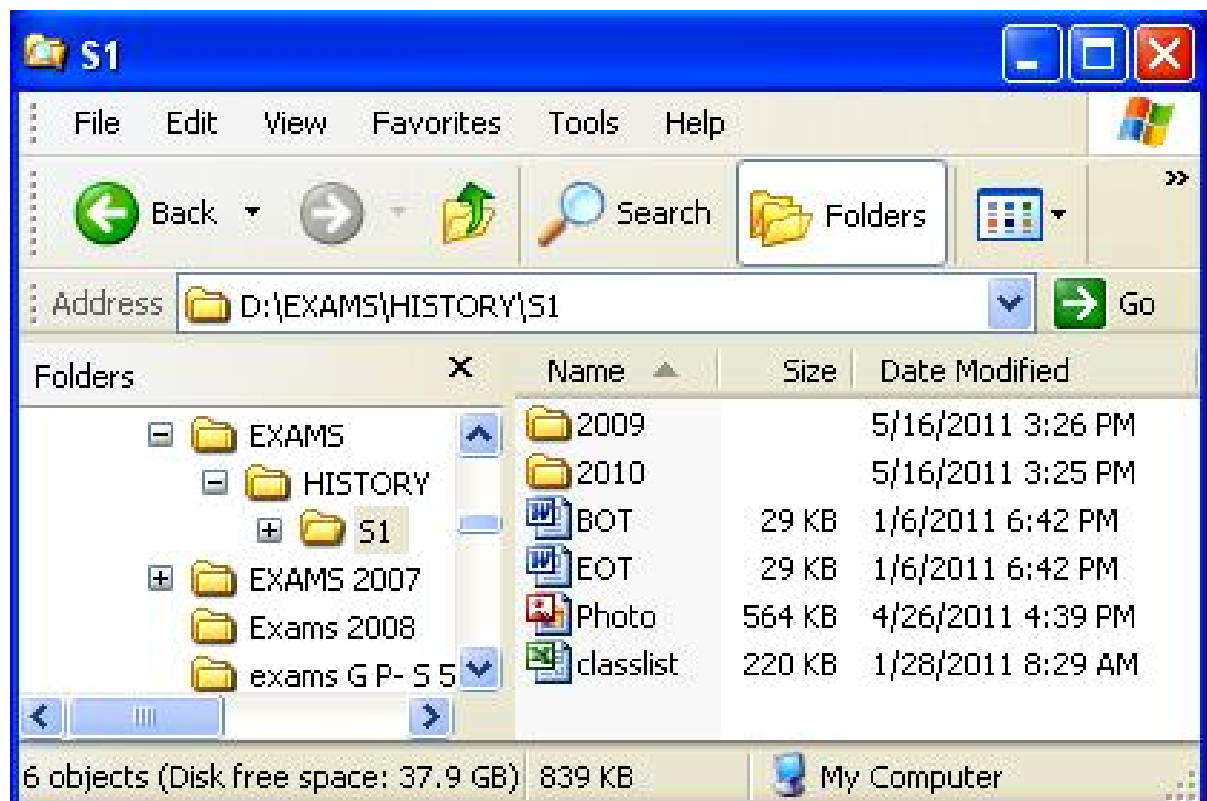
Data type	Use
Text	Describes text or combination of text/characters or numbers that do not require calculations.
Memo	Describes long text.

Currency	Describes monetary values and numeric data used in calculations.
OLE object	Describes objects such as an excel file, picture, image, that is linked/embedded to a table.

25. (a) Define the following terms as applied to computers:

- (i) **A file** (1 mark)  
A collection of related records.
- (ii) **A folder** (1 mark) a  
Collection of files.
- (iii) **A Menu** (1 Mark)  
A list of options available to a computer user.
- (iv) **A Command button** (1 mark)  
A button that executes an action when clicked.

(b) Study the screenshot below and answer the questions that follow:





(c) How many files and folders are in the S1 window above? (2 Marks)

(i) Files: 4 (Four)

(ii) Folders: 2 (Two)

(b) Write the full path that can be run to open the BOT word document shown in the screenshot above (include its file extension) (2 Mark)

Answer: D:\Exams\History\S1\BOT.doc

(b) What is the size of the photo in bits? (2 Marks)

From the screenshot: Photo size=564 KB

1 Kilobyte = 1024 bytes

1 Byte=8 bits.

564 KB= 4620288 bits.

26. (a) Differentiate between the terms **Computer Communication** and **Computer network**. (2 Marks)

Computer communication is the process by which two or more computers send and receive messages among one another, while a computer network is a collection of interlinked/ interconnected computers that share common resources.

(b) List any **three** examples of computer network types you know (3 Marks)

- i. Local Area Network (LANs)
- ii. Wide Area Networks (WANs)
- iii. Metropolitan Area Networks (MAN)

(c) Mention any five **Merits** of a networked computer over a stand alone computer. (5 Marks)

- i. Reduction of costs.
- ii. Sharing of resources such as Printers, scanners, documents etc.
- iii. Saves time.
- iv. Research.
- v. Centralized administration.
- vi. Distributed load.

### SECTION C: (20 MARKS)

*Answer only one question from this section.*

*Answers are to be done in the answer booklet provided.*

27. (a) Distinguish between Email and Internet. (2 marks)  
(b) Explain any **four** disadvantages of email communication. (8 marks)  
(c) Which factors affect the speed of an Internet connection? (10 marks)

Answers:

**(a) Email (electronic mail) is the sending and receiving of an electronic message over a network, while Internet is a worldwide collection of networked computers.**

**(b) Disadvantages of Email Communication.**

- It may get sent to the wrong person.**
- May not receive emails because of no internet connection.**
- Illegal contents including VIRUS damages end user systems, data & reputation**
- Unwanted spam emails.**
- requires knowledge of computers.**

**(c) Factors that affect the speed of an Internet connection.**

- The Internet Service Provider of your choice.**
- Nature of networking devices such as switches, hubs, cables; CAT3,CAT5, CAT6 enable different data flows. Some devices are not professional to handle local traffic.**
- Bandwidth allocated by the ISP.**
- Packet loss.**
- DNS reverse and forward resolutions.(a given DNS may need to query other DNS servers).**
- settings of the internet browser.**
- nature/type of connectivity, i.e. wired or wireless. Fibre Optics and satellite differ in transmission. Or even modems.**
- Hardware specifications of a machine such as a network adapter.**
- The Network software Installed on the servers.**
- Motherboard Capability and Speed.**
- 

28. (a) (i) What is a printer? (2 Marks)

Answers:

**-A printer is an output device that produces information (text, graphics, or symbols) on a hard piece of paper as a hard copy.**

(ii) With examples, explain the types of printers. (8 marks)

**-Impact printers: These are printers where the printing device directly comes into contact with the printing surface/medium (paper or cloth).**

**-(An impact printer is a type of printer that operates by striking a metal or plastic head against an ink ribbon.)**

**Examples of impact printers include: Dot Matrix, daisy wheel, ball printers.**

**-Non-impact printers are printers where the printing device does not directly come into contact with the medium on which it is printing. Examples of non-impact printers include: Laser printers, inkjet printers.**

(b) Distinguish between primary and secondary storage devices. (4marks)

**-A primary storage device is a component in a computer that stores information for a short period of time for quick access by the computer's processor.**

**-Secondary storage devices are storage devices and storage media that are not always directly accessible by a computer processor.**

(c) Mention any six examples of storage devices. (6 marks)

**-CDs and DVDs, floppy disks, and removable disks, such as Zip disks and Jaz disks.**

**-hard drives**

**-optical disk drives.**

**-flash disks.**

**-Memory cards etc.**

29. The head teacher of Kamuli secondary announces that the secretaries are going to start using computer based word processors instead of typewriters.

(a) State **four** reasons why this change may worry some secretaries and staff.

(8 marks)

Answers:

**-Word processors could lead to unemployment of excess secretaries since work which could need many people using typewriters to -do can be quickly accomplished by only one person.**

**-Word processors require computer literacy and IT skills which many secretaries don't have.**

**-Word processors could lead to eye disorders caused by continuous looking at a light emitting monitor screen.**

**-No work can be done with word processors when electricity is off.**

**-Word processors operate in an environment full of viruses and meltdowns which can lead to deletions and loss of data.**

**-Word processors require purchase of expensive machines such as computers, printers, etc.**

- (b) After some time, most of the staff and students become happy with the head teacher's development of introducing word processors. Mention any **six** word processing features that caused for the happiness. (12 marks)

Answers

- **A variety of quick text formatting options such as bold, underline, italic etc. which give documents a professional look.**
- **Possibility of spelling and grammar checking a document to eliminate errors before printing.**
- **Storage of documents in softcopy for future use.**
- **Word wrap feature which automatically moves text that won't fit within the margin settings onto the next line as compared to manual adjustment of the lever of a typewriter.**
- **Mail merge feature which creates multiples or potentially large numbers of documents from a single template and a single data source.**
- **Easier way of creating good drawings, charts, inserting pictures and art.**
- **Ability to work on many pages at a time such as through inserting page numbers, watermarks, headers and footers.**
- **Availability of a wider range of symbols such as Greek, Arabic, Latin, and Hebrew alphabet characters.**
- **Little noise produced during use of word processors as compared to the noise produced during the operation of typewriters.**
- **Presence of preformatted elements such as designs and document templates e.g. cover pages which can just be modified and used.**
- **Lesser strength required to strike keyboard keys as compared to typewriters which need much energy so as to have a strong visible impact on the stencil.**