UACE S850 Subsidiary Information and communication technology (ICT) Paper 1 2014

2 ½ hour

Answer all questions

1. (a) Explain the term **Information and Communication Technology**. (02marks)

    ………

    ………

    ………

    (b) State **three** ways in which Information technology has improved communication
    (03marks)

    (i) ………

    (ii) ………

    (iii) ………

2. Give one reason why a school director would purchase the following equipment for a computer laboratory (03 marks)

    (i) Blower (01 marks)

    ………

    ………

    (ii) Anti-glare filter screens (02marks)

    ………

    ………

    ………

    (iii) Air conditioner (02marks)

    ………

    ………

    ………

3. During a practical examination, student were required to open a blank file and save is as.
    D:\STUDENT WORK\EOT PRACTICAL\safety.doc

(a) State the name of the immediate subfolder in which students must save the file (01 marks)

………

(b) Write the root directory onto which the file must be saved. (02 marks)

……

(c) Suggest one example of a computer application the student can use to create the file. (01 mark)

……

(d) State the name of the file represented by the above file path. (01 mark)

……

4. Study the devices below and answer questions that follow
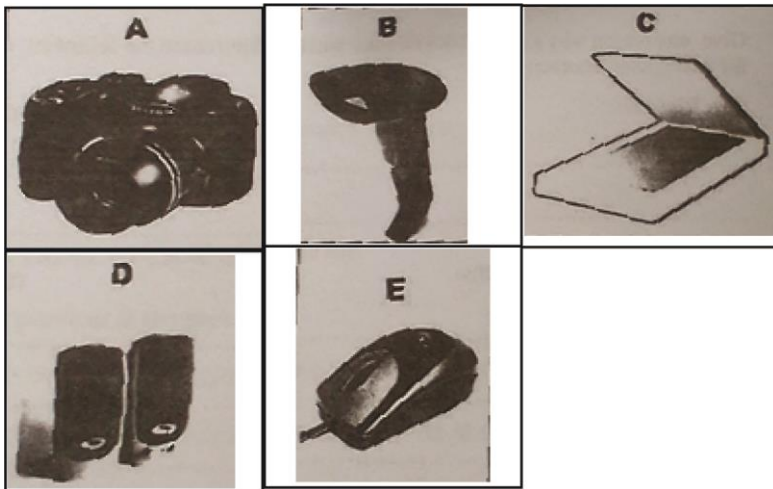
(a) Name the devices labeled (03marks)

A ……

B ………

C …………………………………………………………………………………………………

(b) Give one major similarity between devices A and E. (01 marks)

……

(c) Identify one device which can be categorized as an output device. (01 marks)

……

5. Read the statement below and write the word TRUE or FALSE in the space provided
    (05marks)

	STATEMENT	TRUE/FALSE
(a)	Machine code is one of the low level computer language	
(b)	Microsoft is the only operating system in use in Uganda	
(c)	WINZIP is an example of a system software which reduces the actual size of a file	
(d)	A student delivering a presentation would need an LCD projector and a laptop	
(e)	Screen saver can be categorized as desktop publishing software since they can be used for advertising purpose	

6. (a) State two adverse effects of using Internet for business and communication (02 marks)

  (i) ……
  (ii) ……

  (b) Suggest the most appropriate Internet Communication Service in the following situations:
    (i) Online meeting between two company employees in geographically separated regions. (01 mark)
    ……
    (ii) Instant and real time communication between friends. (01 marks)
    ……
    (iii) Typed views on an on-going online discussion among a specific group of people. (01 mark)
    ……

7 (a) Identify any three devices other than computers required to set up a network within a school environment. (03marks)
   (i) ……
   (ii) ……
   (iii) ……
   (b) Distinguish between **data communication** and **networking**. (02 marks)
     ……
     ……
     ……

8. (a) List three possible threats to data networked environment (02marks)

(i) ……

(ii)……

(iii)……

(b) Name any two types of security measures which can be used to control the threats listed in (a) above   (0 marks)

(i) ……

(ii)……

9. Given below is a notice which a head girl has typed and intends to pin up on all the notice boards in the school.

THE REGIONAL SWIMMING GALA
ON 22ND NOVEMBER 2014 AT
MAKERERE UNIVERSITY POOL

FEE 5000

REGISTER WITH HEADGIRL

Explain any five word processing features which the head girl would use to enhance the appearance of the above notice

(a) ……
……

(b) ……
……

(c) ……
……

(d) ……
……

(e) ……
……

10. (a) Suggest one way in which computers have been made user-friendly for persons that are physically challenged in the following areas (04marks)

(i) without hands (01 marks)

……

……

(ii) Impaired vision (01mark)

……

……

(b) Give three health issues that may be caused by prolonged use of computers. (03 mark)

(i) ……

(ii)……

(iii)……

11. (a) Choose the appropriate file extensions from the list given for sentences (a) to (e)

.doc, .txt, .tif, .bat, sys (05 marks)

(a) Programs files that perform fundamental operations in computer ………………………
(b) A Microsoft word file …………………………………………………………………………………….
(c) A file containing series of commands during boot up. …………………………………………
(d) A plain file created using note pad …………………………………………………………………..
(e) A graphic file created using application such as Adobe Photoshop …………………….

12. (a) State any three operations of the machines of a central processing Unit (03marks)

(i) ……

(ii)……

(iii)……

(b) Describe any one of the operations stated in (a) above. (02marks)

……

……

……

13. (a) A set of instructions that are arranged inn a logical way to run a computer is called (01 marks)

……

……

(b) List any three categories of system software (03marks)

(i) ……

(ii)………

(iii)………

 (c) Give an example of a presentation software ……………………………………………………… (01marks)

14. (a) Give three benefits of connecting computers to the internet (03 marks)

    (i) ……
    ………
    (ii) ……
    ………
    (iii) ………
    ………

    (b) Outline two disadvantages of connecting computers to the internet. (02marks)

    (i) ……
    ………
    (ii) ……
    ………

15. Explain why an organization would prefer to use Electronic mail (E-mail) over ordinary mail (05 marks)

    (i) ……
    ………
    (ii) ……
    ………
    (iii)……
    ………
    (iv) ……
    ………
    (v) ……
    ………

16.   Outline five areas of self-employment that a sub ICT student can engage in (05 marks)

    (i) ……
    (ii) ……
    (iii) ………

(iv) ………

(v) ………

17. Use the terms below to complete the sentences that follow I (a) – (e) (05 marks)

Slide transition   slide design

Slides   slide show

Animation effect   Slide master

Slide layout   handouts

(a) The Visual movement from one slide to another ……………………………………………………………

(b) The ………………. Set up the way text/objects appear on a slide during a presentation.

(c) The presentation of slides in sequence on a projection screen is referred to as

………

(d) The …………………..defines the arrangement of all items that make up a slide

(e) A user can print the entire presentation on one page by printing the.

18. (a) State one difference between a Compact Disc (CD) and Digital Versatile Disc (DVD) (05marks)

………

………

………

(b) Explain the circumstance under which the following storage devices are used.

(i) Memory card (02 marks)

………

………

(ii) Flash disk (02mark)

………

………

19. (a) Descrie the following terms in programming. (03maarks):

(i) Interpreters

………

………

(ii) Syntax

………

………

(iii) Debugging

………

………

(b) Identify two characteristics of a good programming language

(i) ……

(ii) ……

20. Using the email address annet@gmail.com, identity these parts stand for.

(a) annet ………………………………………………………………………………………………(01marks)

(b) @ …………………………………………………………………………………………………..(01marks)

(a) gmail …………………………………………………………………………………………….(01marks)

(a) .com ……………………………………………………………………………………………… (01marks)

Suggested answers

1. (a) Explain the term **Information and Communication Technology**. (02marks)

   Information and communication technologies (ICT) is defined as a diverse set of technological tools and resources used to transmit, store, create, share or exchange information.

   (b) State **three** ways in which Information technology has improved communication (03marks)
   (i) fast
   (ii) reliable
   (iii) cheap
   (iv) improved shopping and payment methods

2. Give one reason why a school director would purchase the following equipment for a computer laboratory (03 marks)
   (i) Blower (01 marks)
       Blows dust off and out of the computers
   (ii) Anti-glare filter screens (02marks)
       Improves vision of the screen
   (iii) Air conditioner (02marks)
   Maintains favorable temperatures in the computer laboratory

3. During a practical examination, student was required to open a blank file and save is as.
   D:\STUDENT WORK\EOT PRACTICAL\safety.doc
   (e) State the name of the immediate subfolder in which students must save the file (01 marks)
       EOT PRACTICAL
   (f) Write the root directory onto which the file must be saved. (02 marks)
       D:
   (g) Suggest one example of a computer application the student can use to create the file. (01 mark)
       Word processing .
   (h) State the name of the file represented by the above file path. (01 mark)

       Safety.doc

4. Study the devices below and answer questions that follow
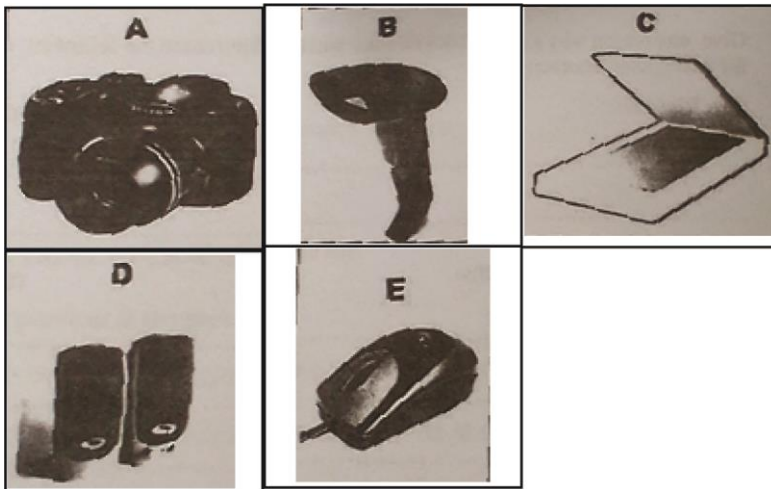
(d) Name the devices labeled (03marks)

A- digital camera

B- Bar code reader

C- Scanner

(e) Give one major similarity between devices A and E. (01 marks)

They are input devices

(f) Identify one device which can be categorized as an output device. (01 marks)

D

5. Read the statement below and write the word TRUE or FALSE in the space provided (05marks)

	STATEMENT	TRUE/FALSE
(a)	Machine code is one of the low level computer language	TRUE
(b)	Microsoft is the only operating system in use in Uganda	FALSE
(c)	WINZIP is an example of a system software which reduces the actual size of a file	TRUE
(d)	A student delivering a presentation would need an	

	LCD projector and a laptop	TRUE
(e)	Screen saver can be categorized as desktop publishing software since they can be used for advertising purpose	FALSE

6. (a) State two adverse effects of using Internet for business and communication (02 marks)

- (i) **Unemployment:** Automation and advanced technologies can lead to job losses, especially in roles that are easily automated.
- **Cyber security Risks:** Increased reliance on ICT makes businesses vulnerable to cyber-attacks, data breaches, and other security threats
- **High Costs:** Implementing and maintaining ICT systems can be expensive.
- **Workplace Distraction:** The constant connectivity provided by ICT can lead to distractions and decreased productivity
- **Technological Dependence:** Over-reliance on technology can make businesses vulnerable if systems fail.
- **Work-Life Balance:** ICT blurs the boundaries between work and personal life.

(b) Suggest the most appropriate Internet Communication Service in the following situations:

(i) Online meeting between two company employees in geographically separated regions. (01 mark)

Video conferencing software

(ii) Instant and real time communication between friends. (01 marks)

Video conferencing software, live chat software, Instant massaging

(iii) Typed views on an on-going online discussion among a specific group of people. (01 mark)

Email

7 (a) Identify any three devices other than computers required to set up a network within a school environment. (03marks)

- **Router:** Connects your network to the internet and manages traffic between devices.
- **Modem:** Connects to your ISP (Internet Service Provider) and provides internet access.
- **Switch:** Expands the number of devices you can connect in a wired network.
- **Access Point:** Extends the range of your wireless network.
- **Cables:** Ethernet cables (Cat5, Cat5e, or Cat6) for wired connections.
- **Network Interface Cards (NICs):** Required for each device to connect to the network.

(b) Distinguish between **data communication** and **networking**. (02 marks)

Data communication, **the process of transferring data over a transmission medium between two or more devices, systems, or places.**

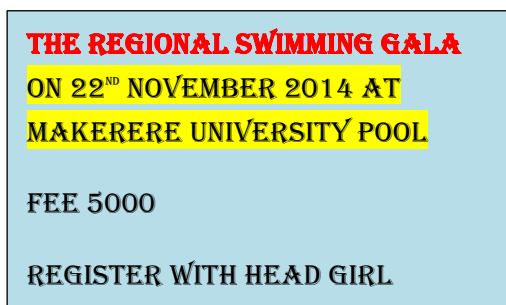A networking is a connection of at least two computers either by cable or wireless connection.

8. (a) List three possible threats to data networked environment (02marks)
   - **Malwares** such viruses, worms and Trojans that infect systems, steal data or cause disruption
   - **Phishing:** e-mail phishing are deceptive e-mails that trick user into revealing sensitive information and spear phishing ot targeted attacks on specific individuals within an organization.
   - **Network Hacking** or unauthorized access to network resources to steal data or disrupt services
   - **Weak security control**
   - **Insider threats** where employ or contractor misuse their access to harm the organization.

   (b) Name any two types of security measures which can be used to control the threats listed in (a) above   (0 marks)
   - (Install antivirus software
   - Create strong password
   - Use firewalls to block unauthorized access to the network
   - Encrypt Dada to protect it from unauthorized access
   - Regular Backups to store data in multiple location
   - Train users about cyber security and to recognize phishing attempts and other social engineering attacks.
   - Monitor Network activity using intrusion detection systems (IDS)

9. Given below is a notice which a head girl has typed and intends to pin up on all the notice boards in the school.

THE REGIONAL SWIMMING GALA

ON 22ND NOVEMBER 2014 AT

MAKERERE UNIVERSITY POOL

FEE 5000

REGISTER WITH HEAD GIRL

Explain any five word processing features which the head girl would use to enhance the appearance of the above notice

(a) Making the title bold

(b) Changing the color of the title

(c) highlighting some text

(d) using fancy fonts

(e) Use attractive background

10. (a) Suggest one way in which computers have been made user-friendly for persons that are physically challenged in the following areas (04marks)

(i) without hands (01 marks)
- Speech recognition
- Mouth, Chin, Lip-Direct Access
- Head Movement-Direct Access

(ii) Impaired vision (01mark)
- Font magnification
- Speech recognition

(b) Give three health issues that may be caused by prolonged use of computers. (03 mark)

- Muscle and joint pain
- Overuse injuries of the shoulder, arm, wrist, or hand
- Eye strain
- Backache
- Upper limb disorders (repetitive strain injury or RSI)

11. (a) Choose the appropriate file extensions from the list given for sentences (a) to (e)

.doc, .txt, .tif, .bat, sys (05 marks)

(a) Programs files that perform fundamental operations in computer **.sys**
(b) A Microsoft word file **.doc**
(c) A file containing series of commands during boot up. **.bat**
(d) A plain file created using note pad **.txt**
(e) A graphic file created using application such as Adobe Photoshop **.tif**

12. (a) State any three operations of the machines of a central processing Unit (03marks)

- **Registers** are small amounts of high-speed memory contained within the CPU. They are used by the processor to store small amounts of data that are needed during processing, such as: the address of the next instruction to be executed.

- **Control unit** is a unit that controls all activities that go on within the computer

- **Arithmetic Logic Unit ALU** is where all calculation and logic operations happen
- **RAM (computer memory)** is used to temporally store data that is required for processing within the CPU.

(b) Describe any one of the operations stated in (a) above. (02marks)

……

……

……

13. (a) A set of instructions that are arranged inn a logical way to run a computer is called (01 marks)

Software

(b) List any three categories of system software (03marks)

(i) Operating system **manages hardware, software resources, and provides common services for computer** programs. **Drivers** allow operating system to communicate with hardware devices like printer, graphic cards, network adapters etc.
(ii) **Utility software** performs maintenance tasks such as disk cleanup, antivirus scanning and file management to ensure the system runs smoothly.
(iii) **Firmware** is **low**-level software embedded in hardware devices, providing control and communication between the devices and other system components.
(iv) **Boot loaders** are responsible for loading operating system into computer's memory when the system is powered on
(v) **Language processors/translators** translate high-level programming languages into machine codes that the computer can execute.

(c) Give an example of a presentation software ………………………………………………………… (01marks)

- Microsoft PowerPoint
- Google slide
- Keynote

14. (a) Give three benefits of connecting computers to the internet (03 marks)

- Faster communication
- Access to information
- Transfer of research papers
- Advertising
- Marketing
- Easy banking

- Access to a global audience
- More efficient government services.
- Cultural sharing and diversity.
- Virtually unlimited entertainment options, videos and music

(b) Outline two disadvantages of connecting computers to the internet. (02marks)

- Malware and viruses.
- Hacking, where unauthorized users gain access to computer systems, email accounts, or websites.
- Fake websites.
- Spread of false information
- Identity theft.
- Data breaches.
- Phishing and scam emails.

15. Explain why an organization would prefer to use Electronic mail (E-mail) over ordinary mail (05 marks)

- Reduce postage costs
- Fast
- It is environmentally friendly
- Convenient : letters are created and sent from anywhere.
- Improve document security.
- Mails can be sent and receive simultaneously to multitude of recipients at ago.

16. Outline five areas of self-employment that a sub ICT student can engage in (05 marks)

- Computer repair and maintenance
- Computer and parts sales
- Computer Programmers.
- Web Designers.
- Database Analysts.
- Project Managers.
- Security/Networking Analysts.
- Technology Support.

17. Use the terms below to complete the sentences that follow I (a) – (e) (05 marks)

Slide transition	slide design
Slides	slide show
Animation effect	Slide master

Slide layout   handouts

(a) The Visual movement from one slide to another **Slide transition**

(b) The **slide design** set up the way text/objects appear on a slide during a presentation.

(c) The presentation of slides in sequence on a projection screen is referred to as **slide show**

(d) The **Slide layout** defines the arrangement of all items that make up a slide

(e) A user can print the entire presentation on one page by printing the **handouts**

18. (a) State one difference between a Compact Disc (CD) and Digital Versatile Disc (DVD) (01marks)

     DVDs store more data compared to CDs

    (b) Explain the circumstance under which the following storage devices are used.

    (i) Memory card (02 marks)

    - They are used in storing data like pictures, documents, and videos.
    - They are also used in creating data backups.
    - The data and information in the memory card can be password protected.
    - The memory card can easily be transported from one place to another.
    - They are non-volatile and possess an incredible data transfer rate hence used globally.
    (ii) Flash disk (02mark)

    - Flash disks are solid-state drives that are durable
    - Store large huge amount of data
    - High transfer rate

19. (a) Describe the following terms in programming. (03maarks):

    (i) Interpreters

        An interpreter is **a software that converts high-level language code to machine code line by line and executes it immediately.**

    (ii) Syntax

        Syntax is a **set of rules that determine how to arrange characters in a valid statement in a language.**

    (iii) Debugging

        Debugging is **the process of identifying and resolving errors or bugs in a software system.**

(b) Identify two characteristics of a good programming language

- Simplicity: A good programming language should be easy to understand and use, with clear syntax and semantics.
- Readability: The language should promote code readability, making it easy for programmers to understand and maintain the code.
- Expressiveness: A good programming language provides expressive power, enabling developers to write concise and meaningful code.
- Scalability: Scalability is the ability of code to handle an increasing amount of data and traffic.
- Testability: Testability is the ability to write automated tests to verify the correctness of the code.

20. Using the email address annet@gmail.com, identity these parts stand for.

(a) annet- **username** (01marks)

(b) @ - **at** (01marks)

(a) gmail- **domain** name (01marks)

(a) .com - top-level domain (01marks)

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Thanks

Dr. Bbosa Science