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UACE S850 Subsidiary Information and communication technology (ICT) Paper 1 2017

2 ½ hour

Answer all questions

1. (a) Name one tool used to remove dust from a computer. (01 marks)

- Electric Duster / Air Blower blow dust from key board and hidden parts of the computer.
- Anti-Static Brush is used to remove or scrape off the very fine dust that sticks to the fan blades and inside the fan frame.
- Microfiber Cleaning Cloths wipe of dust from the computer
- Screen Cleaners (Also known as Screen Cleaning Solutions) are used together with microfiber cleaning clothes to remove dirt, fingerprints, and dust from a computer.
- Vacuum Cleaners extract dust from key board and hidden parts of the computer.

(b) Give reasons why one would require the following in the computer laboratory (03marks)

(i) Uninterruptible Power Supply (02 marks)

- Keep computer running for at least a short time when incoming power is interrupted to prevent loss of unsaved data and to allow proper shutdown of computer.
- Prevent damage to computer in event of power failure
- Stabilize power
- Prolonged usage of computer in during abrupt power shutdown and thus increased efficiency.

(ii) LCD projector (02 marks)

- Lectures
- Video
- Quizzes and attendance
- Demonstrations
- summeries

2. (a) Write the procedure for changing the name of existing file or folder (03 marks)

- (i) Open File Explorer and navigate to the location where the file or folder is stored.
- (ii) Right-click the name of the file or folder you wish to rename.
- (iii) Click Rename (on the menu that opens up).
- (iv) Type a new name for the file and press Enter.

(b) Explain the function of a device driver in a computer system (02 marks)

- Operate and control a device attached to a computer.
- Provide an interface between the operating system (and application) and the device.
- To tell the operating system how to communicate with the hardware component.
- Translate requests between the device and the computer.

3. Write the following in full as used in Information and Communication Technology

- (a) CCTV stands for Closed-Circuit Television
- (b) ROM stands for **Read-Only** Memory
- (c) CAD stands for Computer Aided Design
- (d) CPU stands for **Central Processing Unit**
- (e) VDU stands for Visible Display Unit

4. (a) Identify one storage device that is resistant to virus attacks (01marks)

CD, DVD, DVDR

(b) Describe the following terms as used in computer;

(i) File (02marks)

A computer file is a collection of digital data (text, images, media etc.) stored as a single object on a disk.

(ii) Folder (02marks)

A folder is an **area on the computer containing other folders and files** and helps keep the computer organized

5. (a) State four categories of computer systems. (04marks)

- On the basis of size and capacity: Supercomputer, Mainframe, Mini, and Micro Computer.
- On the basis of purposes: General and Special Purpose.
- On the basis of hardware design and type: Analog, Digital, and Hybrid Computer.
- Personal Computers (PCs)
- Workstations

(b) Give the function of any one category you have stated in 5(a). (01mark)

Personal computer is used to do and store personal data

6. Indicate TRUE or FALSE against each statement in the table below. (05marks)

	Statement	TRUE /FALSE
(a)	Open source software is copyrighted and distributed without cost for trial period	T
(b)	Product activation is used to ensure that software is not installed illegally	T
(c)	Programming software interfaces user application and computer hardware	F
(d)	A file extension is a combination of characters used to identify a file NB. it identifies a type of file	F
(e)	A clipboard holds copied data	T

7 (a) Define the term hardware as used in Information and Communication Technology (02marks)

Hardware refers to the external and internal devices and equipment of computers that enable input, output, processing and storage of data.

(b) Name two ports used to connect devices on a computer (02marks)

- USB port
- HDMI
- Ethernet
- VGA
- DVI (Digital Visual Interface)
- Thunderbolt
- Audio Jack used to connect headphones, microphones and speaker

(c) Give one device that can be used to transfer a hardcopy document to a computer. (01marks)

Scanner

Digital camera

8. (a) What is a system software (01mark)

System software is a type of computer program that is designed to run a computer's hardware and application programs.

(b) Outline four functions of operating system (04marks)

- manages files,
- manages memory,
- manages processes,
- handles input and output,
- controls peripheral devices like disk drives and printers

9. (a) Distinguish between Reading and writing in relation to storage medium. (02marks)

Reading from storage media means that user is copying or moving data from storage media to the computer.

Writing to storage media means that user is copying or moving data to storage media from the computer.

(b) Mention one example for each of the types of storage devices given below

(i) Optical storage: **CD-ROM, DVD-ROM, and Blu-ray disc drives,**

(ii) Magnetic storage: **Hard Disk Drives (HDDs), floppy disks, and magnetic tapes.**

(iii) Solid storage : **memory cards, flash disks**

10. (a) Name two examples of documents created using desktop publishing applications.
(02marks)

(i) Brochures

(ii) News papers

(iii) Magazines

(iv) Greeting card

(v) flayers

(b) State any three desktop publishing features that can be enhance enhance the document you named in 10(a) (03 marks)

- **Text tools** that allow creation of documents with various fonts, text wrapping, drop caps and paragraph styles
- **Graphic tools** for easy insertions and edit of images
- **Page layout** tools such as grinds and guides to align elements precisely on page and use of layers to organize different elements on separate layer to easier editing and complex designing.
- **Provision for master templates** with consistent headers, footers and other repeating elements
- **Interactive elements** such as hyperlinks and multimedia integration tools for audio and videos into a document.
- **Provision of stylish templates** for brand development and maintenance.

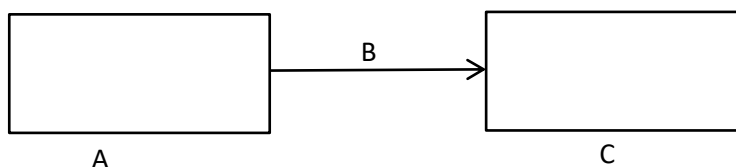
11. (a) Outline any three threats that a system Administrator may face as a result of networking
(02marks)

- **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 or targeted attacks on specific individuals within an organization.
- **Network Hacking** or unauthorized access to network resources to steal data or disrupt services
- **Insider threats** where employ or contractor misuse their access to harm the organization.
- **Distributed Denial of Services (DDoS)** that cause service disruption.
- **Social Engineering** or manipulating individuals into divulging confidential information
- **Advanced Persistent Threats (APTs)** or long-term targeted attacks aimed at stealing data or spying on the organization.
- **SQL Injection (SQLi) attacks** or exploiting vulnerabilities in web application to access or manipulate database
- **Man-in-the- middle (MitM) attack** or intercepting and altering communication between two parties without their knowledge.
- **Weak Security Control** or poorly configured systems and outdated software that can be easily exploited by attacks.

(b) Suggest two measures that the system administrator can employ to reduce the network threats. (03marks)

- Install antivirus software
- Create strong password
- Use firewalls to block unauthorized access to the network
- Encrypt Data 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)
- Update and patch system to fix vulnerabilities that could be exploited by attackers
- Implement strict access control to sensitive information
- Develop a comprehensive security policy that covers aspects of network security and data handling.

12. Study the data communication below and answer the questionsthatfollow



(a) Name the elements of data communication (02marks)

A - sender /transmitter

B – transmission medium

C – receiver

(b) Suggest the device used to connect A to B (01 mark)

Cable/wire/ transmission media

wireless

(c) State the protocol used to uniquely Identify A and C (01mark)

A – Encodes/encrypts data

C – Decodes data

13. The table below consist of some of the peripheral devices of a computer. Indicate Input or output (05 marks)

	PERIPHERAL DEVICES	INPUT/OUTPUT
(a)	Biometric reader	Input
(b)	Projector	output
(c)	Plotter	output
(d)	Scanner	input
(e)	Headphones	output

14. (a) Give two reasons why an electronic spreadsheet is suitable for preparing budgets. (02 marks)

- Offer limitless customization
- Handles vast amount of data
- Makes adjustment of figures easy
- Organizes and makes tracking of income and expenditure easy
- Makes calculation easy
- Provide flexibility in how to manage and analyze the budget
- Enhances visualization through use graphs
- Provides storage and easy accessibility options
- Cheap because most spread software like Google Sheets is free

(b) State one use of the following applications

(i) Presentation software (01 mark)

- Teaching
- Lectures
- Demonstration

- Project report
- Workshops
- Marketing reports
- training

(ii) Word processor (01marks)

- document creation: letters, report, resume, stories and essays
- edits and formats documents
- provides templates for documents like business letters, invoices etc.
- mail merge: automating the process of sending personalized letter or email to multiple recipients
- Creates academic papers and articles
- Creates tables charts and lists of organized information effectively
- Automatically checks and corrects spelling and grammatical errors

(iii) Communication software (01 marks)

- Instant messaging
- Video conferencing
- File sharing
- Entertainment
- Relaxation

15. (a) Name one example of presentation software (01marks)

- **Microsoft** PowerPoint
- Google Slides
- Prezi
- Pitch
- **Visme**
- **Keynote**
- Haiku Deck
- Canva

(b) Give the importance of each of the following features as used in electronic presentation

(i) Master slide

- Enhances presentation efficiency i.e. changes made on the master slide apply to all slides in the presentation saving time for individual slide manual editing
- Consistency i.e. all slides will carry the same log, color, fonts etc.
- Enhances visual effects.

(ii) Transition (02marks)

- Enhance appearance
- Control speed

16. (a) State three advantages of using e-mail service over sending mail by post. (03 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.

(b) State two advantages of post-mail over e-mail communication. (02marks)

- It tangible creating stronger impression
- Carry physical parcels that e-mail can't
- Proof of existence of receiver and residence
- Post office are not prone to hacking
- Personal touch: Handwritten letter or cards carry a sentimental value that email can't replicate

17. Give five examples of networking software (05marks)

- Novel Netware
- Apple talk
- Digi card
- NanjaOne
- Intermapper. Useful Free Network Tools.
- Econet for acorn computers
- UNIX Windows for work groups

18. Outline five ways in which a student can use the Internet. (05marks)

- Access To Knowledge: the internet provides students with a wealth of knowledge from all over the world.
- Students access online tutorials and classes
- Research Work Becomes Easier

- Internet facilitate communication of students with teachers and peers through emails and chatrooms.
- Internet provide platform for students to express their creativity.
- It is convenient to access libraries and database resources.

19. (a) (i) What is data transmission media (01marks)

Transmission media is the physical path between the transmitter and the receiver through which data is sent from one place to another.

(ii) Give two examples of data transmission media. (02marks)

- Cable/wired
- wireless

(b) Name two services offered by data communication tools. (02marks)

- mails
- video conferencing
- SMS
- Phone calls
- Tutorials
- entertainment

20. (a) Give any two services that use electronic payment (E-payment) method. (02 marks)

- Online bank transfer
- payment of utilities
- payment for airtime
- payment of school fees and tuitions
- online shopping

(b) State three advantages of using E-payment over traditional methods. (03 marks)

- reliable
- fast
- secure: reduces risk of theft
- low cost
- convenient because it can be done anywhere at any time

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Thanks

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