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INFORMATION AND
COMMUNICATIONS
TECHNOLOGY (ICT)
Paper 1
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2¹/₄ hours



KABS' ICT RESOURCES CENTER

Uganda Certificate of Education

INFORMATION AND COMMUNICATIONS TECHNOLOGY

Paper 1

Theory

2 hour 15 minutes

Final Guide

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ITEM 2: Scenario:

James runs a small grocery store where he manually keeps track of sales and inventory in a ledger. He often faces challenges with tracking stock levels and generating sales reports. A friend suggested using a computerized system to manage his store more efficiently.

James received a catalog with various ICT tools that could help automate his store operations, but he is unsure which tools to choose.

(a) Guide James in selecting the appropriate ICT tools to improve his sales tracking and inventory management.

Approach and Response:

Section A - Item 1: ICT Tools Selection and Maintenance

Introduction:

In today's digital age, the efficient management of business operations is increasingly dependent on the effective use of Information and Communications Technology (ICT). For small businesses, like James's grocery store, transitioning from manual processes to computerized systems can significantly enhance operational efficiency, accuracy, and customer satisfaction.

1. Selection of ICT Tools:

- **Point of Sale (POS) System:** James should choose a POS system that integrates sales tracking with inventory management. This system will automate sales transactions, update inventory levels in real time, and generate sales reports, thus enhancing efficiency.
- **Inventory Management Software:** This tool will help James monitor stock levels, set reorder alerts, and prevent stockouts or overstocking. For example, Asalta Inventory, QuickBooks, Zoho Inventory
- **Barcode Scanner:** A barcode scanner will speed up the checkout process and ensure accuracy in sales and inventory records.

- **Computer:** A computer with sufficient processing power and storage will be essential for running the POS and inventory software.
- **Receipt Printer:** This device will allow James to provide customers with receipts, improving the professionalism of his business.

(b) Advise James on how to keep the ICT tools in good working condition.

2. Maintenance of ICT Tools:

- **Regular Software Updates:** Ensure that all software, including the POS and inventory management software, is regularly updated to improve performance and security.
- **Hardware Cleaning:** Regularly clean the hardware components, such as the barcode scanner and computer, to prevent dust accumulation, which could cause overheating or malfunction.
- **Use of Surge Protectors:** Protect the equipment from power surges by using surge protectors or an Uninterruptible Power Supply (UPS).
- **Data Backup:** Regularly back up sales and inventory data to prevent data loss in case of hardware failure or cyber-attacks.
- **User Training:** Provide training for James and his employees to effectively use the new tools.

Conclusion:

By adopting the recommended ICT tools and maintaining them properly, James can enhance his store's efficiency and ensure sustainable growth, setting a strong foundation for future success.

ITEM 2: Scenario:

A fire broke out in the library of a university, destroying several computers and important academic records stored on the server. Some damaged books and computer parts were left scattered on the floor.

The next morning, the librarian collected the damaged items and considered discarding them.

(a) Advise the librarian and the university management on what might have caused the fire and the measures they should take to prevent such incidents in the future.

Approach and Response:

Section B - Part I - Item 2: Fire Incident Response and Management

Introduction:

Fire incidents can have devastating effects, especially in environments such as a university library, where critical academic records and valuable resources are stored. A recent fire in the university library resulted in the destruction of computers and important records, highlighting the need for effective risk management and recovery strategies.

1. Causes of Fire and Preventive Measures:

- **Electrical Faults:** Electrical faults, such as short circuits or faulty wiring, are common causes of fires in environments with heavy use of electronic equipment. *To prevent such incidents, the university should conduct regular electrical inspections and maintain equipment properly.*
- **Overheating Devices:** Overheating can occur if computers and other electronic devices are not properly ventilated. *The university should ensure adequate ventilation and avoid overloading power outlets.*
- **Poor Maintenance:** Lack of regular maintenance can lead to the buildup of dust and other flammable materials. *Implementing a*

regular maintenance schedule for all ICT equipment will help prevent fires.

(b) Demonstrate how the university can manage and possibly restore the damaged books and computer parts.

2. Management and Restoration of Damaged Items:

- **Assess the Damage:** The first step is to assess the extent of the damage to the computers and academic records. For partially damaged computers, data recovery services can be employed to retrieve important information.
- **Data Recovery:** If the servers are affected, data recovery software or professional data recovery services should be used to recover critical academic records.
- **Book Conservation:** Damaged books should be carefully assessed. If salvageable, conservation techniques such as drying and repairing the pages should be applied. Books beyond repair should be replaced or digitized copies obtained.
- **Disposal of Irreparable Items:** Any items that cannot be restored should be disposed of following proper e-waste management protocols to prevent environmental harm.
- **Recycling:** Properly recycle electronic waste through certified e-waste recyclers.

Conclusion:

Implementing preventive measures and a robust recovery plan will protect the university's assets and ensure swift restoration after any future incidents, maintaining academic continuity.

ITEM 3: Scenario:

Students at a local high school are frequently using smartphones and other devices during classes and late into the night, leading to distractions, poor academic performance, and health issues such as eye strain and sleep deprivation.

The school principal wants to address this issue through a campaign to educate students on responsible use of ICT.

Prepare a presentation for the students about the negative consequences of excessive ICT use and suggest strategies for balanced and healthy usage.

Approach and Response:

Section B - Part I - Item 3: ICT Use and Health Campaign

Introduction:

The rapid adoption of Information and Communications Technology (ICT) among students has brought both benefits and challenges. At Modern High School, the excessive use of smartphones and other devices has led to significant issues, including distractions in class, declining academic performance, and health problems such as eye strain and sleep deprivation. Recognizing these concerns, the school principal aims to launch a campaign to educate students on responsible ICT use.

1. Consequences of Excessive ICT Use:

o Health Issues:

- **Eye Strain:** Prolonged exposure to screens can lead to digital eye strain, characterized by symptoms such as blurred vision, dry eyes, and headaches. This condition can worsen over time if not addressed.
- **Sleep Deprivation:** Using devices late into the night, particularly before bed, disrupts sleep patterns by interfering with the production of melatonin, a hormone that regulates sleep. This can lead to chronic sleep deprivation,

affecting students' overall well-being and academic performance.

- **Academic Distractions:**

- **Reduced Focus:** The constant use of smartphones during classes leads to distractions, reducing students' ability to concentrate on their studies. This can result in lower academic performance as students fail to absorb and understand the material being taught.
- **Decreased Productivity:** Excessive ICT use can also lead to procrastination, where students spend more time on entertainment and social media rather than on their studies, leading to missed deadlines and incomplete assignments.

- **Social Effects:**

- Decreased face-to-face interactions, increased loneliness

2. **Strategies for Balanced and Healthy ICT Usage:**

- **Screen Time Limits:**

- Encourage students to set limits on their screen time, particularly during study hours and before bedtime. This can be achieved through built-in parental controls on devices or third-party apps that monitor and restrict usage.

- **Scheduled Breaks:**

- Implementing a routine of taking regular breaks during screen use can help reduce the risk of eye strain and improve concentration. The 20-20-20 rule (looking at something 20 feet away for 20 seconds every 20 minutes) is an effective way to prevent digital eye strain.

- **Promote Physical Activity:**

- Encourage students to engage in physical activities and hobbies that do not involve screen time. This can include sports, reading, or creative arts, which help maintain a healthy balance between digital and offline life.

- **Education on Responsible Use:**

- Organize workshops and seminars to educate students on the importance of responsible ICT use. Topics should include the risks of overuse, strategies for managing screen time, and the importance of maintaining a healthy lifestyle.

Conclusion:

The proposed campaign will equip students with the awareness and habits needed for balanced ICT use, boosting both their academic performance and overall well-being.

ITEM 4: Scenario:

Anna is a recent university graduate looking for a job. She found an online job listing that requires applicants to submit their resume, cover letter, and academic transcripts through an online application portal.

Anna has her documents in physical format and is unfamiliar with the process of digitizing and submitting them online.

Provide a write-up detailing the steps and ICT tools she should use to successfully digitize and submit her job application online.

Approach and Response:

Section B - Part II - Item 4: Digitizing and Submitting Job Applications

Introduction:

In the modern job market, the ability to efficiently digitize and submit application materials online has become a critical skill for job seekers. Anna, a recent university graduate, faces the challenge of converting her physical documents into digital format and navigating the online submission process. As many employers now require online applications, mastering these steps is essential for presenting oneself professionally and effectively in the digital landscape.

1. Steps for Digitizing Documents:

- **Scanning Documents:**

- Anna should begin by scanning her physical documents (resume, cover letter, and academic transcripts) using a scanner or a mobile scanning app like **Adobe Scan, CamScanner, Microsoft Office Lens**. Ensure that the scanned documents are clear and saved in PDF format for easy uploading.

- **Converting to PDF:**

- If any of the documents are not already in PDF format, Anna should use **a PDF converter, Adobe Acrobat, Smallpdf**, or

the 'Save as PDF' function available in most word processing software (e.g., Microsoft Word) to convert her documents into PDFs. This format is preferred for its compatibility and ease of access on most platforms.

2. Prepare Application Materials

- **Resume and Cover Letter:** Use a word processor to write or update the resume and cover letter. **Applications:** Microsoft Word, Google Docs, LibreOffice Writer.

3. Steps for Submitting the Application Online:

- **Create an Email Account (if not already done):**
 - If Anna doesn't already have an email account, she should create one using a platform like Gmail. This will be necessary for communication with potential employers and for submitting her application.
- **Accessing the Job Portal:**
 - Using a web browser *like Google Chrome, Mozilla Firefox*, Anna should navigate to the job application portal specified in the job listing. She should carefully read through the instructions provided on the website.
- **Filling in the Application Form:**
 - Once logged in, Anna should fill out any required fields in the online application form. This might include personal details, educational background, and work experience.
- **Uploading Documents:**
 - Anna should locate the 'Upload' or 'Attach' button on the application portal. She can then browse her computer or mobile device to find the digitized resume, cover letter, and academic transcripts, and upload them to the portal.
- **Reviewing and Submitting:**
 - Before submitting, Anna should carefully review all the information entered and the documents uploaded to

ensure there are no errors. Once satisfied, she should click the 'Submit' button to finalize her application. She should save any confirmation number or receipt provided by the portal for future reference.

Conclusion:

By mastering the digital submission process, Anna can confidently present her qualifications and increase her chances of landing her desired job in today's competitive market.

ITEM 5: Scenario:

A community-based health organization is applying for a grant to fund a new health initiative. They need to access an online application form, fill it with their project details, and submit it before the deadline.

The project coordinator lacks the ICT skills to download, complete, and upload the form.

Provide a write-up outlining the necessary steps and ICT tools to be used to complete and submit the online application form successfully.

Approach and Response:

Section B - Part II - Item 5: Completing and Submitting Online Forms

Introduction:

Securing funding through grants is often crucial for community-based organizations looking to implement new initiatives. A community-based health organization is in the process of applying for a grant to support a new health project, but the project coordinator lacks the necessary ICT skills to complete and submit the required online application form. In the competitive environment of grant applications, accuracy and timeliness are key.

1. Steps for Completing the Online Form:

- **Download the Form:**

- Use a computer connected to the internet to access the website where the form is stored.
- Open a web browser (e.g., **Google Chrome, Firefox**) and navigate to the relevant webpage.
- Locate the form and download it to the computer.

- **Fill the Form:**

- Use a PDF editor e.g. **Adobe Acrobat, Foxit Reader** or word processing software to fill in the required information. Ensure all fields are accurately completed.

- **Save the Completed Form**
 - **Saving:** Save the filled form with a clear and descriptive file name using built-in save functions in PDF editors or word processing
- **Scan Supporting Documents:**
 - If supporting documents (e.g., project details, letters of recommendation) are in physical form, use a scanner or scanning app to convert them to digital format (**PDF**).
- **Attach and Upload Files:**
 - Log in to the online portal using the required credentials.
 - Attach the completed form and scanned documents by selecting the 'Attach Files' option and navigating to where the files are stored on the computer.
- **Submit the Application:**
 - Review all information for accuracy before submitting.
 - Click on the '**Submit**' button to send the application. Ensure to receive and save a confirmation email or reference number.

Conclusion:

Following the provided steps will enable the project coordinator to submit the grant application accurately and on time, enhancing the organization's prospects for securing crucial funding.