

**840/1**  
**INFORMATION AND**  
**COMMUNICATIONS**  
**TECHNOLOGY(ICT)**

**Paper 1**  
**2024**



**UGANDA NATIONAL EXAMINATIONS BOARD**

**Uganda Certificate of Education**

**INFORMATION AND COMMUNICATIONS TECHNOLOGY(ICT)**

**Paper 1**  
Theory

*New Lower Secondary Curriculum*

***SCORING GUIDE***

**ITEM I**

Competency (Basis of assessment)	Evidence: Skill/ability exhibited/Score	SCORE
Provides a focused introduction	Produces a focused introduction	<b>01</b>
Describes a minimum number of ICT tools/software that are required to setup a functional system.	<ul style="list-style-type: none"> <li>• Identifies and describes <b>5</b> or more of the listed ICT tools/Software which will help Isaac improve his services and retain customers               <ul style="list-style-type: none"> <li>Computer set</li> <li>Digital camera</li> <li>Scanner</li> <li>Printer</li> <li>Application Software</li> </ul> </li> <li>• Identifies and describes <b>3-4</b> of the listed ICT tools/Software which will help Isaac improve his services and retain customers</li> <li>• Identifies and describes <b>1-2</b> or more of the listed ICT tools/Software which will help Isaac improve his services and retain customers</li> <li>• Identifies and describes <b>1</b> of the listed ICT tools/Software which will help Isaac improve his services and retain customers</li> <li>• No response</li> </ul>	<p><b>04</b></p> <p>03</p> <p>02</p> <p>01</p> <p>00</p>
Explains maintenance of ICT tools in good working condition	<ul style="list-style-type: none"> <li>• Identifies and explains <b>5 or more</b> management measures of the listed ICTs/software</li> <li>• Identifies and explains <b>3-4</b> management measures of the listed ICTs/software</li> <li>• Identifies and explains <b>1-2</b> management measures of the listed ICTs/software</li> <li>• Identifies only <b>1</b> management measure of the listed ICTs/software</li> <li>• No response</li> </ul>	<p>04</p> <p>03</p> <p>02</p> <p>01</p> <p>00</p>
Conclusion	Provides a relevant conclusion ( <i>solution/judgement/recommendation</i> )	<b>01</b>
Format of presentation	A formal document: Either a Report, a letter, a CV or Proposal	<b>01</b>



**ITEM 2**

Competency (Basis of assessment)	Evidence: Skill/ability exhibited/Score	Score
Provides a focused introduction	Produces a focused introduction	<b>01</b>
Explains the causes of breaking into the lab and theft of computer lab equipment	<ul style="list-style-type: none"> <li>• Identifies and explains <i>more than 4</i> causes of insecurity in the laboratory.</li> <li>• Identifies and explains <i>4</i> causes of insecurity in the laboratory.</li> <li>• Identifies and explains <i>2-3</i> causes of insecurity in the laboratory.</li> <li>• Identifies and explains <i>1</i> causes of insecurity in the laboratory.</li> <li>• No response</li> </ul>	<p><b>04</b></p> <p><b>03</b></p> <p><b>02</b></p> <p><b>01</b></p> <p><b>00</b></p> <p><b>01</b></p> <p><b>00</b></p>
Provides security measures and mitigation for improper-waste management	<ul style="list-style-type: none"> <li>• Explains 3 measures, identifies key stake holders and their roles in e-waste management (1 measure for each listed stakeholder)               <ul style="list-style-type: none"> <li>○ School Administration</li> <li>○ Lab Attendant</li> <li>○ Students</li> <li>○ Community</li> </ul> </li> <li>• Explains <i>less than 3</i> measures and identifies key stake holders in e-waste management of the listed stakeholders</li> <li>• Identifies and explains <i>more than 4</i> measures of insecurity in the laboratory.</li> <li>• Identifies and explains <i>4</i> measures of insecurity in the laboratory.</li> <li>• Identifies and explains <i>2-3</i> measures of insecurity in the laboratory.</li> <li>• Identifies and explains <i>1</i> measure of insecurity in the laboratory.</li> <li>• No response</li> </ul>	<p><b>04</b></p> <p><b>03</b></p> <p><b>02</b></p> <p><b>01</b></p> <p><b>00</b></p>
Conclusion	Provides a relevant conclusion	<b>01</b>
Format of the presentation	A formal document	<b>01</b>

<p><b>T1 d</b> <b>T14 (a-c)</b> <b>T16 (a&amp;b)</b></p>	<p><b>Explains the causes of breaking into the lab and theft of computer lab equipment and provide suitable mitigation/measures.</b></p> <p><b>- Approaches that can be taken to ensure proper e waste management and the how they can be applied</b></p>	<ul style="list-style-type: none"> <li>- Weak doors, these make breaking in or forceful entry easier. This can be solved by using strong metallic doors with strong burglar proofing.</li> <li>- Weak or easy to manipulate locks/pad locks. These become easy to break or open. It can be solved by using strong locks or padlocks.</li> <li>- We can also use access control systems e.g., use of key cards or biometric scanners to control physical access.</li> <li>- Exposure of important hardware components e.g the server, external hard drives(keeping them in easy to reach areas. These have to be locked away in drawers, cabins or kept out of the computer laboratory.</li> <li>- Failure to monitor the computer laboratory especially in the night when its not in use. This gives ample time to thieves to plan and steal. It can be overcome by installing CCTV cameras/ 24/7 Surveillance systems.</li> <li>- It can also be solved by installing alarm systems that can go off and produce noise to notify the security personnel on the forceful entry.</li> <li>- Failure to mark, label hardware components which makes them easy to target and also difficult to find or trace in case of theft. Asset tagging or labelling makes it easy to track for items when stolen, we can also attach tracking devices to the important hardware components like the Server computer.</li> <li>- Inadequate Physical Inspection. There's supposed to be regular inspection of the laboratory to identify and solve any potential damage.</li> <li>- Discarded computer components contain toxic substances like lead, mercury, etc. these pollute soil and water. The school administration/teachers can reuse some of these components e.g by crafting them onto display boards for demonstration.</li> <li>- Improper e-waste disposal may lead to data breaches and identity theft. You may not know who will pick on the hard disk, flash disk and any other storage media you throw to the dust bin. The lab attendant may first try to repair or take the component for repair to extract off the information.</li> <li>- Health risks; improper handling and discarding of e-waste can cause health issues such as skin disorders, respiratory disorders, etc. to people such as waste pickers, children. Its important therefore to sensitize the school community/students on the right means of handling e-wastes.</li> <li>-You can also donate the out of use computers and other components to ICT repair shops.</li> <li>- Air pollution. Once thrown at the garbage pit by say lab attendant, e-waste may be burnt which exposes the community to harmful gasses. The school administration may sell off or donate the hardware components that are no longer in use.</li> </ul>
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Competences	Basis of assessment	Expected responses
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### ITEM 3

Competency (Basis of assessment)	Evidence: Skill/ability exhibited/Score	Score
Provides a focused introduction	Produces a focused introduction	<b>01</b>
Explains the consequences of continuous use of ICT	<ul style="list-style-type: none"> <li>Identifies and explains <b>6 or more</b> causes/consequences of ICT usage from the listed categories. (2 for each of the mentioned challenges) -health issues, -data loss and -breach of privacy</li> </ul>	<b>04</b>
	<ul style="list-style-type: none"> <li>Identifies and explains <b>4-5</b> causes/consequences of ICT usage from the listed categories.</li> </ul>	<b>03</b>
	<ul style="list-style-type: none"> <li>Identifies and explains <b>2-3</b> causes/consequences of ICT usage from the listed categories.</li> </ul>	<b>02</b>
	<ul style="list-style-type: none"> <li>Identifies and explains <b>1</b> cause/consequence of ICT usage from the listed categories.</li> </ul>	<b>01</b>
	<ul style="list-style-type: none"> <li>No response</li> </ul>	<b>00</b>
Provides mitigation/measures	<ul style="list-style-type: none"> <li>Identifies and explains <b>6 or more</b> measures for the listed categories of challenges. (2 for each of the listed challenges) -health issues, -data loss and -breach of privacy</li> </ul>	<b>04</b>
	<ul style="list-style-type: none"> <li>Identifies and explains <b>4-5</b> measures for the listed categories of challenges.</li> </ul>	<b>03</b>
	<ul style="list-style-type: none"> <li>Identifies and explains <b>2-3</b> measures for the listed categories of challenges.</li> </ul>	<b>02</b>
	<ul style="list-style-type: none"> <li>Identifies and explains <b>1</b> measure for the listed categories of challenges.</li> </ul>	<b>01</b>
	<ul style="list-style-type: none"> <li>No response</li> </ul>	<b>00</b>
Conclusion	Provides a relevant conclusion	<b>01</b>
Format of the presentation	A formal document	<b>01</b>

<p>Assesses system security, safely uses ICTs and manages E-waste</p> <p>Topic 1 d Topic 7 c Topic 8 (a-c) Topic 16 (a-b)</p>	<p>Consequences of exposure to ICTs and the mitigation strategies</p>	<p><u>Consequences of continuous use of ICT tools.</u> <u>Malware attacks like</u></p> <ul style="list-style-type: none"> <li>- Computer viruses. Copy themselves and corrupt the system <b>Mitigation.</b> Install an anti-virus, regularly update it and scan to detect, disinfect and delete viruses.</li> <li>- Trojan horses. Appears legitimate but performs malicious tasks</li> <li>- Worms. Self-replicate after breaching the system among others <b>Mitigation.</b> Do not use pirated software as this can be an entry point for Trojans and worms.</li> <li>- Phishing. sending emails that appear legitimate in order to induce individuals to reveal personal information <b>Mitigation.</b> Do not download information or open e-mails from untrusted sources</li> <li>- Eavesdropping/ sniffing/ spoofing. it involves intercepting and reading the data packets traversing through the network <b>Mitigation.</b> Encrypt the information travelling over the network</li> <li>- Denial of Service (DoS). This overwhelms the network with excessive requests that exhaust the resources and make it inaccessible</li> <li>- Distributed Denial of Service (DDoS). The traffic flooding the network comes from multiple sources. <b>Mitigation.</b> Use of firewalls to block traffic from suspicious sources</li> <li>- Short circuits. Caused by naked wires, power surges and liquid spills. <b>Mitigation.</b> Insulate all naked wires, don't bring liquids next to the ICTs and use UPS/ voltage stabilizers</li> </ul> <p><b>Health risks</b></p> <ul style="list-style-type: none"> <li>- Eye defects like blurred vision, itchy, dry or red eyes. <b>mitigation.</b> Use anti – glare screens</li> <li>- Back pain, caused by sitting in a bad posture or for long <b>mitigation.</b> Sit upright and get poses or breaks while using a computer</li> <li>- Wrist pain, caused by injury, over use of the hand or repetitive stress. <b>Mitigation.</b> Set your work station right to avoid straining the hand, get breaks while using a computer and exercise the hand</li> </ul>

**ITEM 4**

<b>Competency (Basis of assessment)</b>	<b>Evidence: Skill/ability exhibited/Score</b>	<b>Score</b>
Provides a focused introduction	Produces a focused introduction	<b>01</b>
Describes procedure	<ul style="list-style-type: none"> <li>• Identifies <b>6 or more</b> relevant steps with the necessary ICT tools</li> <li>• Identifies <b>4-5</b> relevant steps with the necessary ICT tools</li> <li>• Identifies <b>2-3</b> relevant steps with the necessary ICT tools.</li> <li>• Identifies 1 relevant step</li> <li>• No response</li> </ul>	04
		03
		02
		01
		00
Follows a logical flow	Complete logical flow. Partial/incomplete Logical flow No logical flow	02
		01
		00
Conclusion	Provides a relevant conclusion ( <i>solution/judgement/recommendation</i> )	01

<b>Competences</b>	<b>Basis Of Assessment</b>	<b>Expected Responses</b>
T3 (a,b) T7 (a,b) T11 a	Steps/processes/procedures Followed to apply online	<p style="text-align: center;"><b>- Stage 1: Converting academic documents from hard copy to soft copy</b></p> <p><b>Tools:</b> scanners, scanning apps like CamScanner (CS), PC</p> <p><b>Application:</b>                      get the document                      open the flatbed scanner cover                      place it there and cover,                      then press the scan button and save the documents.</p> <p><b>Stage 2: Creating a CV</b>  <b>Tools:</b> PC, desktop publishing or word processing software  <b>Application:</b> start the computer.                      Go to all programs,                      Choose the appropriate MS-Publisher, Choose Resume, blank, then create. Design according to the layout                      apply appropriate graphics                      save the publication as <b>CV</b> on a hard disk/flash disk/phone/CD/email.</p> <p><b>Stage 3: Typing an application letter by use of Word processors</b>  <b>Tools:</b> PC, Word processors  <b>Application:</b> Start the computer.                      Go to all programs, Choose blank document,                      type the letter, edit, format and save the document as <b>Application Letter</b> on a hard disk/flash</p>



		<p>disk/phone/CD/email.</p> <p><b>Stage 4: convert all documents to PDF</b>  <b>Tools:</b> PC, word processor, Desktop publisher  <b>Application:</b>  Open the document of interest  Select file, save as  Set the save as type to pdf and save</p> <p><b>Stage 5: creating an email</b>  <b>Tools:</b> PC, web browser  <b>Application:</b> Open a web browser like google chrome.  Enter <i>gmail.com</i> in the web address  Select create account.  Choose the type of account (personal account)  Enter your personal information e.g. surname, first name, user name and password, confirm password  click next and enter your phone number  verify your account with the code sent to your phone</p> <p><b>Stage 6: attaching the files (application letter, academic documents and CV) on online platform i.e. email</b>  <b>Tools:</b> PC, Web browser  <b>Application:</b>  Open your e mail  Select compose  Enter the recipient's address (<a href="mailto:info@sjs.ac.ug">info@sjs.ac.ug</a> )  Compose a greeting line  Select the attach button and browse to find the files (application letter, CV and academic documents)  Select send.</p>
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**ITEM 5**

<b>Competency (Basis of assessment)</b>	<b>Evidence: Skill/ability exhibited/Score</b>	<b>Score</b>
Provides a focused introduction	<b>Produces a focused introduction</b>	<b>01</b>
Describes procedure	• Identifies <b>6 or more</b> relevant steps with the necessary ICT tools	04
	• Identifies <b>4-5</b> relevant steps with the necessary ICT tools	03
	• Identifies <b>2-3</b> relevant steps with the necessary ICT tools.	02
	• Identifies 1 relevant step	01
	• No response	00
Follows a logical flow	Complete logical flow.	02
	Partial/incomplete Logical flow	01
	No logical flow	00
Conclusion	Provides a relevant conclusion ( <i>solution/judgement/recommendation</i> )	01

<b>Competences</b>	<b>Basis Of Assessment</b>	<b>Expected Responses</b>
T3 a,b T7 a,b T11 a T13 a	Describes relevant steps	-Access a computer -Downloading the form from the web -Filling the form -Taking some photos about the project -Printing the photos and forms -Scanning the filled forms& photos -Uploading the to the website
	Describes ICT tools used.	- Computers - camera - printer - scanner - flash disks - CDs - Modem - Mobile phones
	Procedure	-computer-(to access the website

		<ul style="list-style-type: none"> <li>-camera-( to take pictures of the projects)</li> <li>-printer(print out the downloaded form and photos)</li> <li>-scanner( scanning the filled forms for uploading)</li> <li>-flash disk( storage of forms to fill just in case)</li> <li>-CD-( to store the soft copies for future use)</li> <li>-modem(connect to internet)</li> <li>-phone( taking mobile photos and communication)</li> </ul>
	logical flow of steps	

SAMPLE