

S850/1

Sub-ICT 1

July/Aug 2026

2 ½ Hours

LUWEERO SESEMAT REGIONAL MOCK EXAMINATIONS

Uganda Advanced Certificate Of Education

MOCK EXAMINATIONS 2026

SUBSDIARY ICT

PAPER 1

TIME: 2 HOURS 30 MINUTES

INSTRUCTIONS:

- This paper consists of two parts: 1 and II
- Answer only **two** items from this paper, choosing **one** item from each part
- All responses should be presented in formal writing layouts

PART I

Answer one item from this part

ITEM 1

CityMed Pharmacy operates several branches and provides an online service that allows customers to order medicines and healthcare products. The organization relies heavily on ICT systems to manage patient records, track medicine inventory, process digital payments, generate invoices, and communicate with suppliers.

Recently, employees have reported several technical difficulties that are disrupting daily operations. Some computers become extremely slow when multiple applications are running, barcode scanners occasionally fail to read product information, and the network connection frequently disconnects, preventing staff from accessing cloud-based records. Additionally, management has noticed that data backups are inconsistent and that some computers have insufficient storage capacity to support growing business operations.

As the pharmacy continues to expand its services, management is concerned that the current ICT infrastructure may not be capable of handling future demands. The organization intends to invest in new technology but requires expert advice on the most suitable hardware, software, networking equipment, and security solutions.

Task:

As an ICT consultant, prepare a comprehensive report evaluating the current ICT challenges facing CityMed Pharmacy and recommend appropriate hardware, software, networking, security, troubleshooting, and maintenance solutions that will improve system performance, reliability, scalability, and support the organization's future growth and service delivery.

ITEM 2

Green Valley College recently invested in a modern computer laboratory to enhance digital learning, online research, computer-based assessments, and administrative operations. The facility contains desktop computers, laptops, network printers, multimedia projectors, wireless internet access, and a local area network (LAN) connecting all devices.

Within the first academic term of operation, several technical and management challenges have been identified. Some computers fail to detect USB storage devices and other peripheral equipment, while others experience frequent system freezes and unusually slow performance. Internet connectivity is inconsistent, making it difficult for learners and teachers to access online educational resources. In addition, unauthorized software installations by some users have resulted in software conflicts and security concerns.

The school's ICT technician has also reported irregular data backup procedures, increasing storage requirements, and growing cyber security risks due to unrestricted internet usage. Furthermore, cases of improper handling of equipment, including network cables, keyboards, projectors, and printers, have been observed among both learners and staff, raising concerns about the long-term sustainability of the laboratory.

The school administration intends to improve the reliability, security, and efficiency of the ICT infrastructure but requires expert guidance on the most appropriate hardware, software, networking, and management solutions to implement.

Task:

Prepare a comprehensive proposal advising the school administration on suitable hardware, software, networking, security, maintenance, and user-management solutions to address the identified challenges, improve the performance and reliability of the computer laboratory, and ensure its sustainable operation and future growth.

PART II

Answer **one item** from this part

ITEM 3

The Dean of Students has received several concerns from parents, guardians, and lecturers regarding students' online behavior. Reports suggest that some students may be accessing inappropriate online content, sharing sensitive personal information, and interacting with unknown individuals through social networking platforms. There are also concerns about cyberbullying, identity theft, misinformation, online fraud, and other cybersecurity threats that could negatively affect students' wellbeing and academic performance.

In addition, the University Council is preparing for an important virtual meeting with international development partners to discuss future academic and infrastructure projects. The meeting will require reliable video conferencing technologies, secure communication channels, and effective methods of sharing official university documents, reports, and presentations with participants located in different countries.

Recognizing the growing role of ICT in higher education and institutional management, the university administration has invited you, as an ICT consultant, to provide professional recommendations on how technology can be used safely, effectively, and responsibly within the university community.

Task:

Prepare a comprehensive report for the university administration evaluating the current use of ICT among students and recommending appropriate digital literacy, cybersecurity, communication, collaboration, and electronic document-management solutions that can promote responsible technology use, protect users from online threats, support virtual meetings and secure information sharing, and enhance teaching, learning, research, and institutional development.

ITEM 4

A new chatbot-based learning platform is being tested at Mountain Ridge University to support students in accessing academic guidance, course-related explanations, research assistance, and day-to-day study support. The platform is intended to improve independent learning by allowing students to ask questions, receive explanations, and access curated academic resources across different disciplines.

During the pilot testing phase, students reported several usability and system-related challenges. Some users complained that the platform requests too many prompts and interactions before allowing full access, which reduces efficiency during urgent academic use. Others indicated that the interface contains commands and navigation elements that are not clearly linked to their academic needs, making it difficult to locate relevant study support features. In addition, there are serious concerns that, under certain conditions, users may accidentally access other students' chat histories, saved documents, or personalized learning data, raising issues of privacy and data protection.

You are part of the development and quality assurance team responsible for refining this chatbot platform. Based on feedback from the pilot users, the university has requested a comprehensive technical improvement proposal.

Task:

Prepare a detailed technical report proposing system-level and user-interface improvements that should be implemented to enhance usability, ensure secure authentication and data privacy, improve navigation and interaction design, optimize response flow, strengthen access control mechanisms, and ensure the platform effectively supports students' academic learning needs while maintaining reliability, security, and scalability.

END