



**UGANDA INSTITUTE OF INFORMATION AND COMMUNICATIONS
TECHNOLOGY**

END OF SEMESTER ONE EXAMINATIONS

ACADEMIC YEAR 2025/2026

DEPARTMENT: ICT
YEAR OF STUDY: ONE
PROGRAMME(S): DIPLOMA IN COMPUTER SCIENCE (DCS)
DIPLOMA IN DATA SCIENCE MANAGEMENT & ANALYTICS (DSMA)
YEAR OF STUDY: ONE
COURSE: FUNDAMENTALS OF ICT PAPER I
COURSE CODE : ICT111 / ICT114
DATE: SATURDAY 13TH, DECEMBER 2025
TIME: 08:00 AM -11:00 AM / 11:30 AM-2:30 PM / 3:00 PM-5:00 PM
DURATION: 3 HOURS

INSTRUCTIONS:

- (a) This paper consists of two sections A and B
- (b) Section A carries 70 marks and it is compulsory
- (c) Attempt **ONLY ONE** question from section B
Each number in section B carries 30 marks
- (d) Create a folder on the desktop and name it using format Surname-RegNo-Session
Leave out slashes in the RegNo. For example, TUSIIME-2025-DCS-123-DAY
- (e) Save all your work for the **THREE** Questions in the folder created in (d) above
- (f) **DO NOT** write on this question paper

SECTION A [70 MARKS]

Attempt ALL the Questions in this section.

Question 1

Microsoft Word

Android is an operating system based on the Linux kernel and designed primarily for touchscreen mobile devices such as smartphones and tablets. Initially developed by Android, Inc., which Google financed and later acquired in 2005, Android was officially unveiled in 2007 along with the founding of the Open Handset Alliance — a consortium of hardware, software, and telecommunication companies committed to advancing open standards for mobile technology.

Android is the most popular mobile OS, and as of 2013, its devices sold more than Windows, iOS, and Mac OS devices combined. In the third quarter of 2013, Android's global smartphone shipment market share reached 81.3%, the highest ever. ~~As of July 2013, the Google Play Store hosted over one million Android apps and recorded over 50 billion downloads. A developer survey conducted in April–May 2013 found that Android was used by 71% of mobile developers. The platform's success has also made it a key target for patent disputes during the so-called "smartphone wars."~~ By September 2013, one billion Android devices had been activated.

Source: wikipedia.org

Required:

(a) Document Setup

Load Microsoft Word and retype the passage above, ensuring accurate spelling, punctuation, and paragraph structure. **(4 marks)**

(b) Page Formatting

Adjust page margins to:
Left: 0.95 inches , Right: 0.87 inches **(2 marks)**

(c) Alignment and Spacing

Justify the entire document and ensure consistent line spacing (1.15 or 1.5 spacing recommended). **(2 marks)**

(d) Page Duplication

Copy the entire content and paste it onto a new page (Page 2) within the same document. **(2 marks)**

(e) Emphasis and Highlighting

Apply a green highlight to the portion of the text that has a strikethrough effect, ensuring it remains readable. **(3 marks)**

(f) Font Customization

Change the entire document's font to Verdana, size 12.5 pt, and verify uniform text formatting. **(3 marks)**

(g) Paragraph Styling

Format the first paragraph with:
Font color: Red Background color: Light green **(3 marks)**

(h) Watermark Design

Insert a semi-transparent diagonal watermark using your name in blue color. (4 marks)

(i) Page Numbering

Add page numbers only on page 2, positioned at the top right corner of the page. (4 marks)

(j) Visual Enhancement

Apply a texture fill effect as the page background of your choice, maintaining professional readability. (4 marks)

(k) Document Review

Insert a comment on the last paragraph with the note:

Final paragraph reviewed for clarity and format (2 marks)

(l) File Management

Save your document using **your surname** as the file name in a designated folder on the desktop. (2 marks)

Question 2

Microsoft Excel-Excel Data Analysis and Visualization

You have been hired as a data analyst at **Tanu Vocational College**. The college has provided you with the following **Semester 1 Test Results** for eight students enrolled in the **August 2025 intake**. Your task is to analyze the data using **Microsoft Excel** and present your findings clearly and professionally.

Name	Comp Math	Comp Architecture	Comp Applications	Comp Ethics
Joy	45	80	90	42
Naboth	64	54	82	46
Opio	35	71	84	90
Jolly	41	57	79	68
Will	54	65	67	64
Yusufu	72	38	82	54
Noyo	47	68	70	59

Grading Criteria

Marks Range	80–100	75–79	70–74	65–69	60–64	55–59	50–54	0–49
Grade	A	B+	B	B–	C+	C	C–	F

Required:

(a) Data Preparation

Strategically enter the above data in an Excel worksheet and ensure that column headers and student names are properly formatted for readability. **(4 marks)**

(b) Data Replication

Duplicate your completed worksheet to **Sheet2** to preserve your original data before performing any calculations or analysis. **(2 marks)**

(c) Analytical Computations

Using appropriate Excel functions:

- (i) Compute the **Total Marks** for each student.
- (ii) Compute the **Average Marks** for each student.
- (iii) Identify and display the **Highest Total Marks** and **Lowest Total Marks** among all students using formulas.

(iv) Format the results for clarity and professionalism. **(16 marks)**

(d) Logical Evaluation

Use the **IF** function (combined with logical operators where necessary) to automatically assign **Grades** for each course unit based on the grading table above. Ensure the logic is dynamic — it should update if marks change. **(4 marks)**

(e) Data Presentation

Apply “**All Borders**” formatting and appropriate column alignment to make your worksheet visually appealing and easy to interpret. **(2 marks)**

(f) Data Visualization

Insert a **3D Pie Chart** to visually compare students’ **Average Marks** against their **Names**.

- Include a clear chart title.
- Display data labels and percentages. **(5 marks)**

(g) Data Management

Save your workbook using **your surname** as the file name in a designated folder on the desktop. **(2 marks)**

SECTION B [30 MARKS]

Attempt **ONLY ONE** Question in this section.

Question 3

Microsoft PowerPoint

A-Task on Computer Hardware Presentation

You have been tasked by your **ICT Fundamentals Instructor** to prepare and deliver a professional **PowerPoint presentation** to your fellow students on the topic “**Computer Hardware.**” Your goal is to design an engaging, informative, and well-structured presentation that demonstrates both your technical understanding and your digital presentation skills.

Presentation Requirements (5 Slides Total)

Slide 1: Personal and Presentation Information

- **Topic:** *Computer Hardware*
- **Name of Presenter**
- **Registration Number and Program of Study** (3 marks)

Slide 2: Definition of Computer Hardware

- Provide a clear and concise definition.
- Include a short explanation of the importance of hardware in computer systems. (2 marks)

Slide 3: Categories of Computer Hardware Components

- Input Devices
- Processing Devices
- Output Devices
- Storage Devices
- Communication Devices (3 marks)

Slide 4: Examples of Input and Output Devices

- Provide at least **three examples** of each.
- Illustrate their functions using images or tables. (3 marks)

Slide 5: Visual Illustration and Conclusion

- Insert a **ClipArt or image** representing computer hardware.
- Conclude with a short summary highlighting the importance of computer hardware in ICT systems. (2 marks)

B-Presentation Formatting and Design Instructions

Required:

- (a) Insert slide numbers at the bottom-right corner of each slide. (2 marks)
- (b) Apply Animation “Split” and Transition “Flip” to all slides for smooth flow. (4 marks)
- (c) Configure all slides to run automatically every 5 seconds for professional timing. (2 marks)
- (d) Apply a Gradient Fill background of your choice to enhance visual appeal. (3 marks)
- (e) Insert a Header (Your Full Name) and a Footer (Fixed Date). (4 marks)
- (f) Save your Presentation using **your surname** as the file name in a folder you created on the desktop. (2 marks)

Question 4

Microsoft Access-Database Design and Query Development

You are provided with two tables from a video library system: Library Table (containing movie records) and Client Table (containing client details). These tables represent a simplified model of a digital video-rental management system. Use the data to perform the tasks below, demonstrating your understanding of relational database design, data integrity, and query generation.

Library Table

ID No	Title	Main Actor Name	Rating	Movie type	Release Date
ID1	Mr. Bone	McCoy Allen	PG	Adventure	01 June 06
ID2	Transporter 1	Josam Statham	O	Action	28 April 07
ID3	Prison Break	Micheal Jones	O	Action	26 May 08
ID4	The Italian	Sylvester Diesel	PG	Action	25 Aug. 09
ID5	The Village	Ivan Cogan	O	Adventure	06 July 11

Client Table

Client ID	Client Name	ID No	Address	Email
1	Joy	ID2	Opp Embassy	amonij@gmail.com
2	Monday	ID2	Kama road, Nduka, Mbase	mablem@gmail.com
3	James	ID1	Lukuli, Ndese, Misoota	jimmyjames@gmail.com
4	Blair	ID4	Kabuga, Kakinga road	blair89@gmail.com
5	Gordon	ID5	Mukashwa, Bikungu zone	ggordon@gmail.com

- (a) As part of strengthening record management and improving data accessibility, design and create a new database named Library that will serve as a centralized repository for movie and client information. **(2 marks)**
- (b) Using Design View, develop two well-structured relational tables that ensure data consistency, accuracy, and future scalability. The tables must include appropriate field names, data types, and primary keys:
- (i) Table Movie – to capture movie metadata such as Title, Release Date, Rating, and Main Actor.
 - (ii) Table Client – to capture client details linked to movie records through a foreign key **(4 marks)**
- (c) To enable efficient tracking of movie rentals and client viewing patterns, establish a one-to-many relationship between the two tables, ensuring that:
- Each movie can be associated with multiple clients.
 - Referential integrity is enforced to prevent orphan records. **(4 marks)**

- (d) Develop the following strategic queries to support data-driven decision-making and improve reporting:
- (i) Create a query that extracts movies rated PG together with their **Main Actor Names**, sorted in **ascending order** by Main Actor. Save the query as **"MovieRating"**. (3 marks)
 - (ii) Generate a query that consolidates client–movie information by displaying **Client ID, Title, Movie Type, Client Name, and Address**.
This query should support managerial reporting on rental patterns. Save it as **"General"**. (3 marks)
- (e) To enhance document professionalism and ensure proper identification of student work, insert a **Header** that includes **your full name** and a **Footer** that contains **your registration number**. This ensures that all printed or exported documents from the database system can be authenticated and traced to the creator. (3 marks).
- (f) Develop well-structured Reports that will support managerial review and data-driven decision-making by presenting information in a clear and user-friendly format:
- (i) Generate a comprehensive report based on the **Client Table**, ensuring that all client details are accurately displayed. Format the report appropriately for institutional use and save it as **"Clients_report"**. (4 marks)
 - (ii) Using the results from the previously created General Query, produce a consolidated analytical report that combines client and movie information. This report should support management analysis of client–movie interactions. Save the final output as **"General_report"**. (4 marks)
- (g) Save your database work using **your surname** as the file name in a folder you created on the desktop. (3 marks)

END