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KIRIRI WOMEN'S UNIVERSITY OF SCIENCE AND TECHNOLOGY UNIVERSITY EXAMINATION, 2024/2025 ACADEMIC YEAR FIRST YEAR, SECOND SEMESTER EXAMINATION FOR THE DIPLOMA IN INFORMATION & COMMUNICATION TECHNOLOGY **DIT 1008 – COMPUTER APPLICATIONS II**

Date: 4TH December 2024 Time: 11:30AM - 1:30PM

INSTRUCTIONS TO CANDIDATES ANSWER OUESTION ONE (COMPULSORY) AND ANY OTHER TWO OUESTIONS **QUESTION ONE (30 MARKS)**

1. You are an intern at Habitat Homes, a company that designs affordable housing for low-income families. Your supervisor has tasked you with creating a basic floor plan for a small house using LibreCAD. This floor plan will include rectangular rooms and an elliptical feature for a decorative garden at the front.

Required

- Draw a simple floor plan for a house using LibreCAD, incorporating rectangular rooms and an elliptical a) garden based on the following instructions. Draw the House Layout with the following specifications.
 - Create a rectangle for the main living room with dimensions 10 meters by 8 metres. Place this rectangle i. starting at coordinates (5, 5). (5 Marks)
- Draw another rectangle for the bedroom with dimensions 6 meters by 4 meters, positioned adjacent to the b) living room at coordinates (15, 5). (4 Marks)
- Draw the Elliptical Garden using the following specifications; c)
 - Using the Ellipse tool, draw an elliptical garden with a major radius of 3 meters and a minor radius of i. 2 meters, centered at coordinates (5, 18) in front of the living room. (4 Marks)
- Label this feature as "Garden" using the Text Tool, placing the label above the ellipse. (5 Marks) d) (4 Marks)
- Draw an Exterior Wall with the following specifications e)
- Around the living room and bedroom, draw a larger rectangle with dimensions 18 meters by 12 meters, f) starting at coordinates (2, 2) to represent the house's exterior wall. (4 Marks) (4 Marks)
- Save the drawing as "House FloorPlan LibreCAD.dxf." g)

QUESTION TWO (20 MARKS)

Mwanzo Mining Company is a growing mining enterprise that values employee welfare and transparent payroll management. David, the Payroll Manager, is responsible for calculating salaries for various employees, including miners, engineers, and administrative staff. Each month, he follows specific guidelines to evaluate employee salaries, including their basic pay, allowances, and deductions, ensuring accurate and timely payments.

Below is the salary information for several employees at Mwanzo Mining Company. This data will be used to answer the examination questions.

Employee Name	Job Title	Basic Salary (USD)	Allowance (USD)	Deductions (USD)
James	Miner	3,500	500	300
Sarah	Engineer	5,500	750	500
Ahmed	Miner	3,200	450	280
Jane	Administrator	4,200	600	400

Employee Salary Details Table

Required

- a) Write an Excel IF function that checks if the employee's basic salary is greater than \$4,000. If it is, return "High Salary," otherwise return "Standard Salary." (5 Marks)
- b) Write an IF function that gives an additional bonus of \$100 to employees in the "Engineer" job title. For all others, the allowance remains the same. (6 Marks)
- c) Create an IF function that applies a higher deduction of \$600 for employees whose basic salary is more than \$5,000, and a standard deduction for all others. (5 Marks)

(4 Marks)

d) Calculate the Net Pay for each employee.

QUESTION THREE (20 MARKS)

You are a junior design assistant at "ArcDesign Studios," a not-for-profit organization that provides architectural drafting services for community projects. Your team is working on creating a basic floor plan for a community park, which includes circular garden areas.

As part of the design, you are tasked with drawing a perfect circular garden in the park's layout using LibreCAD.

Draw a circle with a specified radius using LibreCAD based on the following instructions.

Required

a)	Open LibreCAD and start a new drawing.	(4 Marks)
b)	Using the Circle tool, create a circle with a radius of 10 meters, centered at coordinates (20,	20) on the
	grid. Ensure that the circle is correctly positioned and sized.	(5 Marks)
c)	Label the circle as "Garden Area 1" using the Text Tool and adjust the label to be placed near	r the top of
	the circle.	(6 Marks)
d)	Save the drawing as "CommunityPark_LibreCAD.dxf."	(5 Marks)

QUESTION FOUR (20 MARKS)

Jamii Telecommunications is a rapidly expanding telecommunications company that prioritizes employee compensation and benefits. The company offers various salary packages, allowances, and deductions for its employees, depending on their roles and performance. To ensure transparent salary management, the Human Resources (HR) team uses MS Excel to calculate employee salaries, manage allowances, apply deductions, and determine eligibility for special benefits.

Mary, the Payroll Officer, is responsible for processing the salary details of employees at Jamii Telecommunications. She uses specific criteria to calculate salaries and benefits each month, including basic pay, housing allowances, and deductions such as taxes and social contributions.

Employee Name	Basic Salary (USD)	Allowances (USD)	Deductions (USD)
Alex	3,200	450	300
Brenda	3,800	600	250
Caleb	4,500	550	450
Diana	3,000	350	180

Employee Salary Details Table

Required

- a) Write an IF function in Excel to determine if an employee's basic salary is above \$3,500. If true, the result should be "Above Average," and if false, it should be "Below Average." (6 Marks)
- b) Using the data provided, write an IF function that calculates whether an employee is eligible for a special housing allowance. Employees receive a housing allowance of \$200 if their total allowances exceed \$500. If the total allowances are \$500 or less, the housing allowance remains \$0. (4 Marks)

- c) Write an IF function to check if an employee's total deductions exceed \$200. If true, return "High Deduction"; otherwise, return "Low Deduction." (5 Marks)
- d) Write an IF function to calculate the net salary after applying tax. The tax rate is 12% of the basic salary if the total salary (basic pay + allowances) is above \$4,500, and 8% if the total salary is less than or equal to \$4,500. (5 Marks)

QUESTION FIVE (20 MARKS)

Benson is an accountant in Mini Mart Limited. He has been tasked to give a report of the goods in the Mart.

		-		E	F	G
em ID	Description	Price		ltem	Quantity	Overall Price
56984	Polish Backpack - Red & White	\$1,245.00		215478	265	
65896	Gorecki: Symphony No. 3	\$ 632.00		159874	354	
15478	Italeri 1:72 - Polish Dutch Lancers	\$ 658.00		951263	652	
26598	Silver Brooch - Village Fence	\$1,587.00		365896	365	
51263	Bronze Patriotic Ryngraf	\$ 256.00		256984	154	
59874	Bronze Patriotic	\$ 254.00		326598	523	
5 6 1 5 5	6984 5896 5478 6598 1263 9874	6984 Polish Backpack - Red & White 5896 Gorecki: Symphony No. 3 5478 Italeri 1:72 - Polish Dutch Lancers 6598 Silver Brooch - Village Fence 1263 Bronze Patriotic Ryngraf 9874 Bronze Patriotic	Arrice Price 6984 Polish Backpack - Red & White \$1,245.00 5896 Gorecki: Symphony No. 3 \$632.00 5478 Italeri 1:72 - Polish Dutch Lancers \$658.00 6598 Silver Brooch - Village Fence \$1,587.00 1263 Bronze Patriotic Ryngraf \$256.00 9874 Bronze Patriotic \$254.00	Arrice Price 6984 Polish Backpack - Red & White \$1,245.00 5896 Gorecki: Symphony No. 3 \$632.00 5478 Italeri 1:72 - Polish Dutch Lancers \$658.00 6598 Silver Brooch - Village Fence \$1,587.00 1263 Bronze Patriotic Ryngraf \$256.00 9874 Bronze Patriotic \$254.00	Intol Description Price Item 6984 Polish Backpack - Red & White \$1,245.00 215478 5896 Gorecki: Symphony No. 3 \$632.00 159874 5478 Italeri 1:72 - Polish Dutch Lancers \$658.00 951263 6598 Silver Brooch - Village Fence \$1,587.00 365896 1263 Bronze Patriotic Ryngraf \$256.00 256984 9874 Bronze Patriotic \$254.00 326598	Intel Description Price Item Quantity 6984 Polish Backpack - Red & White \$1,245.00 215478 265 5896 Gorecki: Symphony No. 3 \$632.00 159874 354 5478 Italeri 1:72 - Polish Dutch Lancers \$658.00 951263 652 6598 Silver Brooch - Village Fence \$1,587.00 365896 365 1263 Bronze Patriotic Ryngraf \$256.00 256984 154 9874 Bronze Patriotic \$254.00 326598 523

a)	Calculate the overall price of the items by using a Function.?	(6 Marks)
b)	Calculate the average price of the items by using a Function	(5 Marks)
c)	Calculate the maximum price of the items by using a Function	(6 Marks)
d)	Calculate the minimum price of the items b using a Function	(3 Marks)