National University
Science & Technology
الـجـامـعـة الوطنية
للعلوم والتكنولوجيا

كليـة عمـان البحـريـة الـدوليـة
International Maritime College Oman

ACADEMIC YEAR 2023 - 2024

Program	Year	Semester	Paper
LTM	**1**	**1**	**Main**

MODULE NAME:	**IT FOUNDATION**		
MODULE CODE:	**PIT I.I**	EXAM DATE:	**19/12/2024**
INSTRUCTOR's NAME:	**Ahlam Mohammad**	DURATION:	**2 hrs**

Questions to be answered on:	Allowed tools:	Number of pages
✓ **Computer**	Pen, Pencil & Calculator	(Incl. cover page): **6**

Points of attention:

- For each question, the maximum earned points are mentioned between brackets at the end of each question.
- Write very clearly! Answers that are not readable are not marked and don't get points!
- Make sure your answers are written to the point.
- All answers should be written **in English.**
- Write all the answers in **blue or black pen only.**
- Use the **pencil** only for **diagrams & graphs.**
- Show all the calculation steps in the given space.
- When finished submit the question paper, together with the answer scripts and the signed cover page to the invigilator.
- Any cheating/copying may result in an instant failing of the examination.

FINAL MARKS

STUDENT NAME:	**40**
STUDENT ID:	**10**

Number of answer scripts:……..……………   **Invigilator:**……………...…..………….….

Student's signature: ……………………….…   **Time of receipt:**……………………..….

Question 1 [10 Marks]

Write Python code using 'Replit.com', https://python-fiddle.com, or any online compiler. Take screenshots of your code and upload them to Moodle.

The code and results should be screenshotted and pasted in a Word document and then uploaded to Moodle.

1. Define a variable **distance** and assign the value **150.5** to it. Print the following message using the print function: "The distance traveled is [distance] kilometers."

2. Write a program that prompts the user to **enter a temperature** as a **floating**-point number, check the temperature, and print one of the following messages:

   If the temperature is below 0 degrees, print "It's freezing!"
   If the temperature is between 0 and 20 degrees, print "It's cold."
   If the temperature is between 20 and 30 degrees, print "It's moderate."
   If the temperature is above 30 degrees, print "It's hot!".

Question 2 **[10 Marks]**

1. **Download** the **workbook-2** that is provided in Moodle.
2. Open the first sheet "Product Info" in the workbook-2.

	A	B	C	D	E	F	G	H
1	Product	Category	Unit Price	Quantity Sold	Stock	Revenue	Left in Stock	
2	Laptop	Electronics	1200	20	50	24000		
3	Shirts	Clothing	25	50	100	1250		
4	Headphones	Electronics	80	15	30	1200		
5	Sneakers	Footwear	60	25	40	1500		
6	Smartphone	Electronics	1000	10	20	10000		
7								
8			4					
9			5					
10			7					
11			8					
12								
13								
14								
15								

3. Format the currency to **$** with **0 decimal** places for the columns **C** and **F**.   **(1 mark)**

4. In **D8**, write a function to check if the **quantity sold** in **D2** is greater than 30. If the quantity is greater, label the product as 'High Demand'; otherwise, label it as 'Low Demand.   **(2 marks)**

5. In **D9**, write a function to categorize the **revenue** in **F3** into three levels: if it is less than 1500, display 'Low Profit'; if it is 2000 or less, display 'Medium Profit'; if it is greater than 2000, display 'High Profit'; otherwise, take no action.   **(3 marks)**

6. In **column G**, use a formula to calculate the number of **items left** in stock   **(1 mark)**

7. In **D10**, write a function to calculate the total **revenue** for all '**Electronic**' products.   **(1 marks)**

8. In **D11**, write a formula to calculate the unit price of the smartphone in cell A6 after adding a **15% tax**.   **(2 marks)**

Question 3 [10 Marks]

1. Open the second sheet "Hotel Info" in the workbook-2.

	A	B	C	D	E	F	G	H	I	J
1	Room	Guest Name	Chek-In Date	Adults	Children	Nights	Unit Price	Total Price	Status	
2	101	Salim	01/05/2023	2	1	3	OMR 80.5		Checked In	
3	102	Ahmed	02/05/2023	1	0	2	OMR 55.7		Checked Out	
4	103	Abdullah	03/05/2023	2	2	5	OMR 150.5		Checked In	
5	104	Maryam	04/05/2023	1	0	1	OMR 98.4		Checked In	
6	105	Nasser	05/05/2023	2	3	6	OMR 48.5		Checked Out	
7										
8		Q2								
9		Q3								
10		Q4						8		
11		Q6								
12										

2. In **C8**, write a function to check if the **room status** is 'Checked In' and the night number is 3 or more. If true, give the customer a **20%** discount; otherwise, offer free breakfast. **(2 marks)**

3. In **C9**, write a function to categorize the number of **nights** in **D3** into three levels: if less than 3, display "Short Stay"; if 5 or less, display "Medium Stay"; if greater than 5, display "Long Stay. **(3 marks)**

4. In **C10**, write a function to calculate the **total nights** for all **checked-out** statuses. **(2 marks)**

5. Use an Excel formula to calculate the **total price** in column **H**. **(1 mark)**

6. Suppose **Nasser** in cell **B6** decides to stay for an **additional 2 nights**. How much should he pay? Write the answer in cell **C11** using an Excel formula. **(2 marks)**

Question 4   **[10 Marks]**

1. Open the third sheet, "Q.3," in the workbook-2.

	A	B	C	D	E	F
1	Date	Product	Region	Salesperson	Amount	
2	01/01/2023	A	North	John	120	
3	01/01/2023	B	South	Mary	150	
4	02/01/2023	A	East	Bob	180	
5	02/01/2023	C	North	John	200	
6	03/01/2023	B	West	Mary	130	
7	03/01/2023	A	South	Bob	170	
8	04/01/2023	A	South	Sara	250	
9	04/01/2023	C	North	Mina	150	
10	05/01/2023	B	East	Mohana	350	
11	05/01/2023	B	East	Mohana	280	
12						
13						

2. **Format** the **currency** to OMR with one decimal place for the co**lumn E.**   **(1 mark)**

3. Insert a pivot table into a new sheet and name the sheet **'Pivot-1**.'   **(1 mark)**

4. The pivot table should display the **product, region**, and **amount** in rows, columns, and values.
                                                                    (3 marks)

5. Insert a **slicer** to filter data by **date**.   **(1 marks)**

6. Insert a **chart** for any of the pivot tables that can graphically display the given data with proper axes and data labels.   **(4 marks)**

MLO & Bloom's Level of Complexity

Q #	MLO Addressed	Complexity Level	Mark	Remark
1	5	Application	10	
2	4	Application	10	
3	4	Application	10	
4	4	Application	10	