الجامعة الوطنية
National University
Science & Technology للعلوم والتكنولوجيا
كلية عمان البحرية الدولية
International Maritime College Oman

Final Exam
PIT I.I: IT FOUNDATIONS I
Fall 2024

Points of attention:

- For each question, the maximum earned points are specified in the question.
- Write clearly! Answers that are not readable are not marked and don't earn marks!
- All answers should be written in English using **blue or black pens** only.
- Use the pencil only for diagrams and graphs.
- Show all the calculation steps in the given space.
- When finished, submit the question paper, together with the answer script and the signed cover page to the invigilator.
- Any cheating/copying may result in an instant failing of the examination.

Exam Duration:	2.5 hours
Instructor's Name:	A. Alhabsi and A. Albalushi
Exam Date:	13/01/2025
Program:	LTM

	40
	10

Student Information			
Name:		ID:	
Signature:			

Invigilator			
Initials:		☐ Student ID checked	
Time received:			

Question 1 **[10 marks]**

Download the Excel sheet **Final Exam** from Blackboard.

Table No.	Dish	Quantity Ordered	Price per Dish (OMR)	Service Charge	Total Bill (OMR)	Discount Eligibility
				10%		
1	Spaghetti	2	8.50			
2	Grilled Chicken	3	12.00			
3	Caesar Salad	4	6.75			
4	Chocolate Cake Slice	5	4.25			
5	Lemonade	3	2.50			
		Highest dish price				
			Total service charges			

a) Format the currency to OMR with one decimal place for the columns D, E, and F. (1 mark)

b) Type a formula to calculate the service charge using 10% as a constant. (1 mark)

c) Type a formula to determine the total bill in column F. (1 mark)

d) Use a function to determine the 'Discount Eligibility' in column G. If the total bill in column F exceeds 10 OMR, display '***Yes, Eligible***'; otherwise, display '***Not Eligible***' (2 marks)

e) Use a function to calculate the total service charge of column E. Enter the answer in cell E13 (1 mark)

f) Use a function to find the highest dish price in column D. Enter the answer in cell D10. (2 marks)

g) Use conditional formatting to highlight all dish prices above 5.00 OMR in column D. Make the background red. (2 marks)

Question 2 **[10 marks]**

Using the same Excel as for Question 1, open the Q.2 tab.

A	B	C	D	E	F	G
Date	**Product**	**Salesperson**	**Units Sold**	**Unit Price (OMR)**	**total sales**	
01/01/2024	Laptop	Alice	10	OMR 300		
02/01/2024	Mouse	Bob	25	OMR 15		
03/01/2024	Keyboard	Alice	15	OMR 50		
04/01/2024	Monitor	Charlie	5	OMR 150		
05/01/2024	Laptop	Bob	8	OMR 300		
06/01/2024	Mouse	Charlie	30	OMR 15		
07/01/2024	Keyboard	Bob	10	OMR 50		
08/01/2024	Monitor	Alice	7	OMR 150		
09/01/2024	Laptop	Charlie	12	OMR 300		
10/01/2024	Mouse	Alice	20	OMR 15		
			Lowest product			

a) Use a function to calculate the lowest product price in column E. Enter the answer in cell E13. (2 marks)

b) Add a column (F) to calculate the total sales for each product (2 marks)

c) Insert a pivot table into the same sheet or into a new sheet and name the sheet Pivot-1. Make the pivot table display the performance of each salesperson (in rows), for each product (columns). Use the total sales as the values. (5 marks)

d) Filter pivot data using the date. (1 marks)

Question 3 **[10 marks]**

Create a new Word document. Add dummy content ***for each section*** and sub-section using the function **=lorem(6)**.

a) Create a title for the document "Ports and Shipping". Use the style sheet Title for this.
b) Create a section heading named "Introduction" and apply Heading Style 1. Modify the Style 1 as Font: Aptos, Size: 18, Color: Red. Then, add a dummy test as per the instruction given in the beginning
c) Add 'Background' as sub-section in Introduction section using Style Heading 2. Change the style to be font: Aptos, size: 18, color: red. Add dummy text.
d) Add three major sections - Procedure, Results and Summary. For each add dummy text.
e) Insert a table of contents after the title and before the introduction.
f) Insert a comment in the first line in the Introduction.
g) Add a header with three sections: your name, IMCO and the page number. Provide a line below the header as shown on this page above.
h) The left, middle and right text must be left-aligned, centered (justified) and right-aligned.
i) Select the first sentence in Introduction and add a reference to it. The reference must be Harvard style. The reference is for a book with title: Supply Chains in Oman, author: Ahmed Badar, year 2021, publisher: Wiley.

Question 4 **[10 marks]**

Write a program in Python using a loop to create a table of the numbers 3, 4, 5, 6, …, 17 as shown below. For each number calculate the square root, the cube and the sin value of that number. Assume the numbers are in degrees. The table must look like:

x	$\sqrt{x}$	x^3	$\sin(x)$
3	1.732	27	0.0523
4	…	…	…
5	…	…	…
…	…	…	…
17	…	…	…

MLO and Bloom's Level of Complexity

Q #	MLO Addressed	Complexity Level	Mark	Remark
1	**4**	Apply (4)	**10**	
2	**4**	Apply (4)	**10**	
3	**1, 2, 3**	Apply (4)	**10**	
4	**5**	Create (6)	**10**	