

ACADEMIC YEAR 2024- 2025

Program	Year	Semester	Paper
LTM	1	2	FINAL

MODULE NAME:	IT FOUNDATION		
MODULE CODE:	PIT I. II	EXAM DATE:	8/06/2025
INSTRUCTOR's NAME:	Mitha Al-Khazimi	DURATION:	2 hrs.

Questions to be answered on: ✓ Space provided on the question paper + submission of the file to Blackboard	Allowed tools: Pen, Pencil & Calculator	Number of pages (Incl. cover page): 5
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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.

STUDENT NAME: STUDENT ID:	FINAL MARKS <table border="1" style="margin: auto; border-collapse: collapse;"> <tr> <td style="width: 50px; height: 50px;"></td> <td style="width: 50px; height: 50px; text-align: center; font-size: 24px;">40</td> </tr> <tr> <td style="width: 50px; height: 50px;"></td> <td style="width: 50px; height: 50px; text-align: center; font-size: 24px;">10</td> </tr> </table>		40		10
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Number of answer scripts:.....

Invigilator:.....

Student's signature:

Time of receipt:.....

Question 1**[10 Marks]****1. What does the "knot" in the Bow-Tie diagram represent?**

- a. The main cause of the event
- b. A preventive control
- c. The Top Event (the central risk event)
- d. The final consequence

2. One disadvantage of the Bow-Tie method is:

- a. It gives an unclear picture of the risks
- b. It cannot be used for hazard analysis
- c. It relies heavily on expert judgment
- d. It does not include any barriers

3. If the Early Start (ES) of an activity is 7 and the duration is 12, what is the Early Finish (EF)?

- a. 19
- b. 18
- c. 12
- d. 20

4. What is the Critical Path in project management?

- a. The shortest sequence of activities to finish the project
- b. The longest sequence of activities without delay
- c. Tasks that can be delayed without affecting the project
- d. An optional path of activities

5. Tracking progress and making adjustments to keep the project on track is done in which phase?

- a. Initiation
- b. Planning
- c. Monitoring and Controlling
- d. Execution

6. Projects are generally created to:

- a. Maintain daily business operations
- b. Explore theories only
- c. Achieve specific objectives within defined limits
- d. Function without a defined outcome

7. What is Free Float?

- a. Time an activity can be delayed without affecting any following activities
- b. Time an activity can be delayed without affecting the project end
- c. Duration of the critical path
- d. Time required to complete all tasks

8. Mitigative barriers are used to:

- Stop the hazard from occurring
- Eliminate all project risks
- Reduce the severity of the consequences after the top event
- Identify future risks

9. Which of the following is true about non-critical activities in CPM?

- They can never be delayed
- They have zero float
- They can be delayed without affecting the project completion date
- They are not part of the project

10. What is the purpose of identifying slack or float in a project schedule?

- To find the most expensive tasks
- To allow flexibility in scheduling non-critical activities
- To eliminate unnecessary resources
- To extend the overall project timeline

Question 1

[15 Marks]

A logistics company in Sohar Port is working on a project that requires several activities to be completed over time.

Answer the following questions based on the table below.

Activity	Duration /Days	Predecessor
A	2	—
B	5	—
C	1	—
D	10	B
E	3	A, D
F	6	C
G	8	E, F

- Draw the network diagram for the above table.
- List the network paths.
- Determine the critical path(s).
- Calculate ES, EF, LS, and LF.
- Determine the free float (FF) for all activities.
- Determine the total float (TF) for all activities.

Question 3

[15 Marks]

Imagine you are responsible for delivering a shipment of frozen meat from Sohar to Muscat.
Your main task is to ensure that the shipment arrives safely and remains at the correct temperature throughout the journey.

Instructions:

Using the **Bow Tie model diagram**, analyse the situation and identify the following:

- Hazard** – What is the main risk involved in transporting this shipment?
- Top Event** – What is the critical event that could happen if the hazard is not controlled?
- Threats** – What are the possible causes that could lead to the top event?
- Preventative Barriers** – What measures can be taken to prevent these threats from happening?
- Mitigative Barriers** – If the top event occurs, what actions can reduce the impact?

MLO & Bloom's Level of Complexity

Q #	MLO Addressed	Complexity Level	Mark	Remark
1	5	Application	15	
2	1, 2	Application	15	
3	4	Remembering & understanding	10	