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

Midterm Exam
PECON II-I: ECONOMICS
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 scripts and the signed cover page to the invigilator.
- Any cheating/copying may result in an instant failing of the examination.

Exam Duration:	1.5 hours
Instructor's Name:	Dr Faiza Kiran
Exam Date:	07/11/2024
Program:	LTM

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Student Information

Name: ID:

Signature:

Invigilator

Initials: ☐ Student ID checked

Time received:

Question 1 **(2 marks)**

Explain why transport is considered a **derived demand**. Provide an example to support your answer.

Question 2 (4 marks)

Identify and explain **TWO** key factors that affect the demand and supply of transport services. **(2 marks factors, 2 marks explanation)**

Question 3 (2 marks)

Write the formula and calculate the ton-mile for a shipment weighing 2,500 tons that is transported over a distance of 300 miles.

Question 4 (4 marks)

Given the following operating expenses for a transportation company, calculate the average cost per mile based on a monthly estimated mileage of 6,000 miles and an actual mileage of 5,500 miles:

- **Truck payment (monthly) :** OMR 1,500
- **Insurance:** OMR 400
- **Driver salary:** OMR 700
- **Fuel costs:** OMR 1,000
- **Maintenance:** OMR 150

Show your calculations for the total fixed costs, total variable costs, and average cost per mile.

Question 5 (2 marks)

The following table shows the average fixed and variable costs per mile for three transportation companies. Analyse the data to determine which company is performing well and demonstrating economies of distance.

Company	Average Fixed Cost per Mile (OMR)	Average Variable Cost per Mile (OMR)	Total Average Cost per Mile (OMR)
Company A	0.55	0.25	0.80
Company B	0.25	0.55	0.80
Company C	0.40	0.40	0.80

Identify which company demonstrates economies of distance and explain your reasoning based on the cost structure provided.

Question 6: **(6 marks)**

For each scenario provided, choose the most suitable mode of transportation and justify your choice.

(3 marks for the choice of mode and 3 marks for the justification.)

Scenario 1

A company needs to transport fresh seafood from a coastal city to an inland restaurant within 24 hours to ensure quality. Choose the most suitable mode of transportation and justify your choice.

Scenario 2

A construction firm requires the delivery of heavy machinery weighing 50 tons to a remote job site located 200 miles away. The delivery must occur within three days. Choose the most suitable mode of transportation and justify your choice.

Scenario 3

An exporter needs to send a large shipment of electronics to Europe. The shipment must arrive within two weeks, and the goods require a controlled environment during transit. Choose the most suitable mode of transportation and justify your choice.

Scenario 4

A law firm needs to send confidential legal documents to a client across the country within 48 hours. The total weight of the documents is only 2 pounds. Choose the most suitable mode of transportation and justify your choice.

Scenario 5

An online retailer offers next-day delivery for orders within the city. The package weights vary from 1 to 10 pounds and are typically small in size. Choose the most suitable mode of transportation and justify your choice.

Scenario 6

A farmer needs to transport 100 tons of grain to a processing plant located 500 miles away. The delivery is not urgent, and cost efficiency is a priority. Choose the most suitable mode of transportation and justify your choice.

END OF EXAM