

**University of Colombo - Sri Lanka**  
**Faculty of Arts**  
**Special Degree Examination in Arts (Geography) Part III**  
**First Semester, Final Examination - 2021 / 2022**  
**GYG 4177 - Transport Geography**  
**Duration: Two hours (02)**

Answer only **three (03)** questions selecting one question (01) from Part I and two questions (02) from Part II.

Outline maps of the world and Sri Lanka will be provided. Calculators can be used.

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**Part I**

1. A company is faces the problem of deciding how to assign existing agencies to send their products to demanding cities minimizing travel distances. The distance (in km) between supply and demand cities is given in the distance matrix in **Table No. 1**.

**Table No. 1**

Demand City Supply City	P	Q	R	S	T
A	85	75	65	85	75
B	90	80	66	90	78
C	75	66	57	75	69
D	80	72	60	80	72
E	76	64	56	72	68

- (i) Determine an optimal solution plan for this problem.

(15 marks)

- (ii) Explain the optimal solution you found.

(05 marks)

(Total 20 marks)

- (2) (i) Find the initial feasible solution for the transport problems given in the cost table (**Table No. 02**) using the following methods.
- (a) North West Corner Method.
- (b) Least Cost Method.
- (c) Vogel's Approximation Method (VAM)
- (15 marks)
- (ii) Optimize the solution using the loading and unloading method.
- (05 marks)
- (Total 20 marks)

**Table No. 2**

	D1	D2	D3	Supply
S1	2	7	4	5
S2	3	3	1	8
S3	5	4	7	7
S4	1	6	2	14
<b>Demand</b>	<b>7</b>	<b>9</b>	<b>18</b>	<b>34</b>

**Part II**

- (3) (i) Define the term transport geography.
- (04 marks)
- (ii) Explain the objectives of transport geography.
- (06 marks)
- (iii) Discuss the importance of transport geography.
- (10 marks)
- (Total 20 marks)
- (4) (i) Describe the impact of spatial physical environment on transport.
- (08 marks)
- (ii) Explain with examples where transportation has overcome the spatial physical environment.
- (12 marks)
- (Total 20 marks)

- (5) (i) Define "modes of transport".  
(04 marks)
- (ii) Classify the present modes of transport in Sri Lanka.  
(06 marks)
- (iii) Describes the evolution of land transport in Sri Lanka.  
(10 marks)
- (Total 20 marks)
- (6) (i) Name the main levels of the spatial organization of transport.  
(02 marks)
- (ii) Briefly describe the arrangement of levels you named in (i) above.  
(06 marks)
- (ii) Select one of the levels you named in (i) above and explain with examples how it is organized.  
(12 marks)
- (Total 20 marks)