

**INDIAN MARITIME UNIVERSITY**  
(A Central University, Government of India)

May/June 2017 End Semester Examinations  
M.B.A. (International Transportation and Logistics) Fourth Semester  
(AY 2015-16 batches onwards)

**Transport Economics and Optimisation (PG22T2401)**

Date : 08.06.2017

Maximum Marks: 60

Time: 3 Hrs

Pass Marks : 30

**Section -A**

Answer ALL the questions (12 x 1 Mark = 12 Marks)

1. Demand for public transport, road freight facilities or airline services is usually \_\_\_\_\_
  - a. Derived Demand
  - b. Supply & Demand
  - c. An independent function
  - d. Supply based
  
2. The following one is not the factor determining Transport demand
  - a. Physical characteristics
  - b. Price
  - c. Passenger income
  - d. Capital
  
3. What measures the responsiveness of demand after a change in a product's own price?
  - a. Change in price
  - b. Price elasticity of demand
  - c. Effective demand
  - d. Effective Pricing
  
4. If transport expenditure is a low proportion of total income then demand will be \_\_\_\_\_
  - a. Elastic
  - b. More
  - c. Inelastic
  - d. Less

5. Percentage change in quantity supplied divided by the percentage change in freight rate or fare level is called
  - a. Law of Demand
  - b. Law of Diminishing return
  - c. Price Elasticity of Demand
  - d. Price elasticity of supply
6. A pricing policy whereby a firm distinguishes between different groups of customers is called
  - a. Price discrimination
  - b. Economic distribution
  - c. Elasticity
  - d. Monopoly control
7. In Air mode the following one is not the load and Revenue related costs
  - a. Passenger and Security costs
  - b. Insurance of passenger and cargo
  - c. Running Cost
  - d. Catering cost on the Aircraft
8. The load factor which required to equate traffic revenue with operating costs, excluding interest on capital is called
  - a. Marginal load factor
  - b. Break-even load factor
  - c. Operating load factor
  - d. Aircraft factor
9. What is the order quantity of inventory that minimizes the total cost of inventory management?
  - a. Maximum level
  - b. Minimum reorder level
  - c. Economic order quantity
  - d. Re-order level

10. When the number of bins is restricted to 1 and each item is characterised by both a volume and a value, the problem of maximising the value of items that can fit in the bin is known as the \_\_\_\_\_
- Knapsack problem
  - Bin packing problem
  - Replacement problem
  - Maximising value
11. What is a mathematical technique used in computer modelling to find the best possible solution in allocating limited resources to achieve maximum profit or minimum cost called?
- Differentiation
  - Computer Management
  - Linear programming
  - Profit modelling
12. A Company consumes a particular product at an average of 50 units/week. It costs 200 to order and 0.5 per unit per week to hold an item on inventory . EOQ is
- 100
  - 200
  - 150
  - 300

### **Section -B**

*Answer ANY FIVE out of 7 questions. (5 x 4=20 Marks)*

13. Explain Peak demand in transport economics and elucidate its importance.
14. Explain in detail the measurement of price elasticity.
15. Explain operational factors affecting costs in air mode transport?
16. Write short notes on Fleet Standardisation.
17. "Equipment Replacement analysis is carried out when there is a need to replace or augment the currently owned equipment"-Discuss.
18. Explain the significance of travelling salesman problem

19. "The Centre of Gravity Method is an approach that seeks to compute geographic coordinates for a potential single new facility that will minimize costs"-Comment

### **Section- C**

*Question No. 20 is Compulsory*

*Answer ANY Three from the remaining questions*

*All questions carry equal mark (4 x 7=28 Marks)*

20. A firm has 3 factories (sources) manufacturing goods which are to be transported to 4 destination. The Cost details, requirement, availability at the source is given. Find the initial basic feasibility solution from the following by using North West corner cell method and Optimization solution by using u-v method.

	<i>Destination</i>				Supply
S O U R C E	3	1	7	4	250
	2	6	5	9	350
	8	3	3	2	400
Demand	200	300	350	150	

21. Explain the factors determining demand
22. Explain the factors Determining the Magnitude of Elasticity
23. Discuss briefly about optimization of milk run routes.
24. "Privatization of SLR in railways is beneficial"-Discuss
25. "In a freely competitive transport market, the allocation of resources and the provision of services would be determined on the basis that operators produced at the lowest possible cost the service required by customers".-Comment

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