

Student ID \_\_\_\_\_

**Navrachana University**  
**School of Business & Law – MBA Program**  
**End-Semester Examination November 2017**  
**Second Year (Semester-III)**  
**Logistics Management – MG210**

Date: 22<sup>nd</sup> November, 2017

Time: 2.0 Hours

Marks: 40

**Instructions:**

- All the questions are compulsory
- Closed book: No reference material is allowed, Only Case Study is allowed
- All questions carry equal marks (10)

1. Decide the optimal distribution plan using A) Least Cost method & B) Vogel's approximation method for the transportation problem given in the below table. Also identify the total transportation cost in both the cases.

From	To			Supply
	1	2	3	
A	\$ 6	\$ 7	\$ 4	100
B	5	3	6	180
C	8	5	7	200
Demand	135	175	170	

2. A) List down differences between Fixed Order Quantity Model & Fixed Time Period Model (At least 5).
- B) The Gilbreth family drinks a case of Royal Cola every day, 365 days a year. Fortunately, a local distributor offers quantity discounts for large orders as shown in the table below, where the price for each category applies to every case purchased. Considering the cost of gasoline, Mr. Gilbreth estimates it costs him about \$5 to go pick up an order of Royal Cola. Mr. Gilbreth also is an investor in the stock market, where he has been earning a 20 percent average annual return. He considers the return lost by buying the Royal Cola instead of stock to be the only holding cost for the Royal Cola.

Discount Category	Quantity Purchased	Price (per Case)
1	1 to 49	\$4.00
2	50 to 99	\$3.90
3	100 or more	\$3.80

- i) Determine the Optimal Order Quantity according to the EOQ model with quantity discounts. What is the resulting total cost per year?
- ii) With this order quantity, how many orders need to be placed per year? What is the time interval between the orders?

3. A) Case Study Question: What are the pros and cons of three options identified by Dominique?  
B) Case Study Question: What action would you take and why? How would you sell your plan to Al Sellery and Claude Germain?
4. Imagine that you have been hired by First Cry – Online Baby and Kid Store as a Logistics Manager and asked to decide the warehouse management from start. Describe the possible steps and considerations you will do before submitting the warehousing plan to CEO. (Hint: Include the design and layout, material handling equipment, IT systems & key metrics to measure the performance)

**About First Cry.com:** We are Asia's Largest Online Portal for Baby and Kids Products. We have over 2 Lakh+ Baby and Kids items from 2 Thousand+ top International and Indian brands like Mattel, Ben10, Pigeon, Funskool, Hotwheels, Nuby, Farlin, Medela, Pampers, Disney, Barbie, Gerber, Fisher Price, Mee Mee and so on. Our mission is to provide best of the products/brands at the lowest prices with great online shopping experience, free shipping and Prompt customer service. Our sourcing team works with over 150 vendors internationally, nationally to source the best products/brands for you at the most affordable price. Our logistics and customer support team works very hard to get your goods delivered at the earliest and respond to any queries that you may have.