

International Islamic University Chittagong
 Department of Business Administration
 Final Examination, Autumn -2018
 Course Code: MKTG-4810, Course Title: Supply chain Management

Full Marks: 50.

Time: 2.30 Hours

(Answer five questions only. All questions are of equal value)

- 1.(a) How would you measure of forecast error? Explain the characteristics of forecast. 04
- (b) What are the methods you will consider in demand forecasting? Explain 03
- (c) KULSHI MART has experienced weekly demand of milk of $D_1=250$, $D_2=257$, $D_3=244$, and $D_4=252$ gallons over the past four weeks. Forecast demand for Period 5 using a four-period moving average. What is the forecast error if demand in Period 5 turns out to be 255 gallons. 03

2. (a) How would you define “aggregate planning” in Supply chain? Describe the information needed to produce an aggregate plan. 05
- (b) What are the aggregate planning strategies? Which strategy you suggest to follow? Why? Describe the forecast error in aggregate plans. 05

3. (a) What is supply chain coordination? Evaluate the effect on performance of lack of coordination. 05
- (b) As a supply chain manager, How would you explain the managerial levers to achieve coordination? 05

- 4 (a) What are the components of ordering cost? IIUC sources from hundreds of suppliers and is considering the aggregation of inbound shipments to lower costs. Truckload shipping costs \$500 per truck along with \$100 per pickup. Average annual demand from each supplier is 10,000 units. Each unit cost \$50 and IIUC incurs a holding cost of 20 percent. What is the optimal order size if IIUC decides to aggregate four suppliers per truck? What is the optimal order size and frequency if each truck has a capacity of 2,500 units ? 05
- (b) Demand for the i-phone handsets at apple store is 2000 units per month. Apple store incurs a fixed order placement, transportation, and receiving cost of \$5000 each time an order is placed. Each i-phone handsets costs at Apple store \$700 and the retailer has a holding cost 20 percent. Evaluate the number of handsets that the store manager should order in each replenishment lot? 05

- 5 (a) Define continuous review and periodic review policy.. What are the different measures of product availability? 04
- (b) Assume that weekly demand for phones at PHP office Supplies is normally distributed, with a mean of 2,500 and a standard deviation of 500. The manufacturer takes two weeks to fill an order placed by the PHP manager. The store manager currently orders 10,000 phones when the inventory on hand drops to 6,000. Evaluate the safety inventory and the average inventory carried by PHP. Also evaluate the average time a phone spends at PHP. 06

6. (a) How would you define transportation? Explain the modes of transportation and their performance. 05
- (b) As a Transportation manager of KDS logistics, How would you design the Transportation Network for your organization? 05

7. (a) How do third parties increase the supply chain surplus? 04
- (b) What are the sourcing processes? Evaluate the risks of using third party. 06