Name: **Enrolment No:**	UPES

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, December 2018

Course: Logistics and Supply Chain Management CC: LSCM 2002 **Semester: III**
Programme: BBA OG, BBA Core(Operations Specialization)
Time: 03 hrs. **Max. Marks: 100**
Instructions: As per sections

SECTION A

S. No.	**Attempt all questions.**	**Marks**	**CO**
Q 1	Mark True/False (T/F) for the following	**10**	
a)	The continuous review system has a decision rule referred to as two-bin system	**2**	**CO2**
b)	FSN inventory control system is used to identify criticality of the component	**2**	**CO1**
c)	Cross docking strategy is appropriate for e commerce companies	**2**	**CO2**
d)	Carrier is the party that moves or transports the product	**2**	**CO4**
e)	Level of control is lowest in case of Public warehouse	**2**	**CO3**
Q 2	Multiple Choice questions	**10**	
a)	A warehouse meant for goods under customs verification is a) Bonded warehouse b) Private warehouse c) Public warehouse d) Contract warehouse	**2**	**CO3**
b)	VMI stands for a) Vendor material inventory b) Vendor managed inventory c) Variable material inventory d) Valuable material inventory	**2**	**CO2**
c)	Which of the following is not a qualitative forecasting method a) Delphi Technique b) Mean Absolute Deviation c) Customer Surveys d) none of these	**2**	**CO2**
d)	Warehouse strategy used by similar group of companies who are not competitors a) Capacity Switching b) Hub Networking c) Outsourcing d) Cobbling	**2**	**CO3**
e)	What mode of transportation is considered least expensive?	**2**	**CO1**

	a) Water b) Air c) Pipeline d) Road		
	SECTION B		
	Attempt any four questions. Each question carries 5 marks.	**20**	
Q3	What do you understand by Bullwhip effect? Explain	**5**	**CO2**
Q4	What are the various modes of transportation? Discuss their characteristics.	**5**	**CO1**
Q5	What is your learning from the online session on e-Chaupal?	**5**	**CO4**
Q6	Explain the three warehouse options: Private, Public and Contract Warehouse.	**5**	**CO3**
Q7	What do you understand by Delphi technique?	**5**	**CO2**
	SECTION-C		
	Note: Attempt all questions. Each question carries 10 marks.	**30**	
Q8	a) Explain clearly the categories of costs that are involved in inventory analysis. b) Diagrammatically show the EOQ cost model.	**10**	**CO2**
Q9	Explain Point to point network, trans-shipment point, Nodal network and hub and spoke network. Show diagrammatically.	**10**	**CO4**
Q10	Explain Hold, Consolidation, Break bulk, Mixing Warehouses. Show diagrammatically.	**10**	**CO3**
	SECTION-D		
	Note: Attempt any three questions. Each question carries 10 marks	**30**	
Q11	At present a company purchases an item X from outside suppliers. The consumption of this item is 10,000 units/year. The cost of the item is Rs 5 per unit and the ordering cost is estimated to be Rs 100 per order. The cost of carrying inventory is 25% of the cost of item. If the consumption rate is uniform, determine the economic ordered quantity.	**10**	**CO1**
Q12	a) Consider that a store is open for 250 days a year. If the annual demand is 10,000 units and the lead time to receive an order is 9 days, determine the reorder point. b) In the above question, if the standard deviation of demand is 5 and the customer service level is 95%, find the reorder point again.	**10**	**CO2**
Q13	Amit manufactures 50000 bottles of tomato ketchup in a year. The price per bottle is Rs. 6, the setup cost per production run is estimated to be Rs. 90, the carrying cost amounts to 20 percent of the price per annum. The production rate is 600 bottles per day, and the demand rate is 150 bottles per day. What is the optimal production lot size (Q*)? Hint: Use Production Quantity model	**10**	**CO2**
Q14	The following information is known about a group of items. Classify the material in A, B, C categories:	**10**	**CO4**

Model No.	Volume	Unit Price
1	30	10
2	280	15
3	30	10
4	1100	5
5	40	5
6	2200	10
7	150	5
8	800	5
9	600	15
10	80	10

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SECTION A

S. No.	**Attempt all questions.**	**Marks**	**CO**
Q 1	Mark True/False (T/F) for the following	**10**	
a)	A review of inventory at regular intervals such as weekly or monthly is called periodic review	**2**	**CO1**
b)	XYZ inventory control system is used to identify criticality of the component	**2**	**CO1**
c)	Cross docking strategy is appropriate for e commerce companies	**2**	**CO2**
d)	Shipper is the party that moves or transports the product	**2**	**CO4**
e)	With postponement, the anticipated risk of finished goods inventory maintenance is reduced considerably	**2**	**CO3**
Q 2	Multiple Choice questions	**10**	
a)	For progressively decreasing weights, the value of smoothing constant should be close to a) 0 b) -1 c) 1 d) none of these	**2**	**CO3**
b)	Inventory in transit after it is dispatched from factory is called a) Decoupling inventory b) Transit inventory c) Pipeline inventory d) Carrying inventory	**2**	**CO1**
c)	Which of the following is not a qualitative forecasting method a) Delphi Technique b) Mean Absolute Deviation c) Customer Surveys d) none of these	**2**	**CO2**
d)	Warehouse strategy used by similar group of companies who are not competitors a) Capacity Switching b) Hub Networking c) Outsourcing d) Cobbling	**2**	**CO3**
e)	What mode of transportation is considered most expensive?	**2**	**CO1**

	a) Water b) Air c) Pipeline d) Road		
	SECTION B		
	Attempt any four questions. Each question carries 5 marks.	**20**	
Q3	What do you understand by Supplier hubs? Explain	**5**	**CO1**
Q4	What are the various forecasting horizons in Operations Planning?	**5**	**CO1**
Q5	What is your learning from the online session on Cold supply chain management?	**5**	**CO4**
Q6	Explain the Quantitative models of Warehouse site selection.	**5**	**CO3**
Q7	What do you understand by containerization?	**5**	**CO2**
	SECTION-C		
	Note: Attempt all questions. Each question carries 10 marks.	**30**	
Q8	a) What are the assumptions of Basic EOQ model? b) Diagrammatically show the EOQ cost model.	**10**	**CO2**
Q9	Explain Point to point network, trans-shipment point, Nodal network and hub and spoke network. Show diagrammatically.	**10**	**CO4**
Q10	Explain the difference between Consolidation and Break bulk warehouses. Show diagrammatically.	**10**	**CO1**
	SECTION-D		
	Note: Attempt any three questions. Each question carries 10 marks	**30**	
Q11	a) Find the forecast for the month of May using exponential smoothing method Demand data Jan 23.3 Feb 27.4 Mar 33.0 Apr 26.5 And the January Forecast was: 27 Smoothing constant = 0.20 b) Find the mean absolute deviation (MAD) if the actual demand for May is 30.0	**10**	**CO3**
Q12	A business has an annual demand of 10,000 for a particular item. They order the item in batches of 1,000 and each order placement has a fixed cost of $120. The cost to hold an item in inventory is $0.80. Calculate the EOQ and Optimal cost.	**10**	**CO2**
Q13	Assume that the company is going to manufacture the item with the equipment that is estimated to produce 100 units per day. The consumption of the item is 10000 units/year. The cost of the unit thus produced is Rs 3.50 per unit. The set-up cost is Rs. 150 per set-up and the inventory carrying charge is 25 %. What is the optimum production lot size(Q*)? Assume 250 working days in the year.	**10**	**CO3**

Q14	The following information is known about a group of items. Classify the material in A, B, C categories: Model No. Volume Unit Price 1 20 10 2 300 20 3 30 10 4 1800 4 5 40 5 6 2200 24 7 150 5 8 1600 7 9 700 15 10 80 10	**10**	**CO4**