Name: **Enrolment No:**	UPES UNIVERSITY OF TOMORROW

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, May 2023

Course: Logistics and Supply Chain Management **Semester: II**
Program: BBA-All **Time : 03 hrs.**
Course Code: LSCM 1005 **Max. Marks: 100**

Instructions:

SECTION A
10Qx2M=20Marks

S. No.	**Attempt all questions in this section**	**Marks**	**CO**
Q 1	Answer the following		
(a)	Logistics is the part of supply chain involved with the forward and reverse flow of a) goods b) services c) cash d) all of the above	**2**	**CO1**
(b)	What are the elements of logistics system? a) transportation b) warehousing c) inventory management d) all of the above	**2**	**CO1**
(c)	Logistics system are made up of 3 main activities. a) order processing b) inventory management c) both ‘a’ and ‘b’ d) none of these	**2**	**CO1**
(d)	Which of the following is not a part of 7R's of Logistics (i) Right time (ii) Right Promotion (iii) Right Condition (iv) all given options are part of 7R's of Logistics	**2**	**CO1**
(e)	After Ocean trade which of the following is the most economical mode of transportation (i) Rail (ii) Road (iii) Air (iv) None of options are correct	**2**	**CO1**
(f)	Logistics packaging helps in reducing transit damage (i) True (ii) false	**2**	**CO1**
(g)	IWT stands for (i) India water transport (ii) International water treaty (iii) International water transport	**2**	**CO1**

	(iv) Inland water transport		
(h)	Outbound Logistics is also referred as upstream logistics (i) true (ii) false	**2**	**CO1**
(i)	Reduction of inventory is a key objective of logistics (i) true (ii) false	**2**	**CO1**
(j)	A logistics network can best be described as (i) The choice of rail, marine, or truck transport (ii) The warehouses, production facilities, retailers, and inventory that flows between them (iii)The routes taken to move goods (iv) The least cost route from producer to retailer	**2**	**CO1**
SECTION B **4Qx5M= 20 Marks**			
Q	**Attempt all questions**		
1	Define 3PL and what are the various types of service provided by 3PL?	**5**	**CO2**
2	How value chain and supply chain are different?	**5**	**CO2**
3	Discuss the various latest technologies used in logistics?	**5**	**CO2**
4	Define the following: safety stock, seasonal stock, cycle stock, pipeline inventory?	**5**	**CO2**
SECTION-C **3Qx10M=30 Marks**			
Q	**Attempt all questions**		
5	An oil engine manufacturer purchases lubricants at the rate of Rs. 42 per piece from a vendor. The requirements of these lubricants are 1800 per year. What should be the ordering quantity per order, if the cost per placement of an order is Rs. 16 and inventory carrying charges per rupee per year is 20 paise. Calculate (a) EOQ (b) Numbers of order per year (c) Annual ordering cost (d) Annual holding cost (e) Total annual cost	**10**	**CO3**
6	Define break even analysis?	**10**	**CO3**

	For an existing product that sells for SP = Rs.650 per unit, FC = Rs.82,000 and VC = Rs. 240 per unit. (a) What is the BEP? (b) What volume is needed to generate a profit of Rs.10,250?		
7	Lockwood Ind. Is considering the use of ABC analysis to focus on the most critical SKUs in its inventory. For a random sample of 8 SKUs, following table shows the annual dollar usage. Rank the SKUs and assign them to 2A, 2B and remaining into C class items	**10**	**CO3**

SKU	Dollar Value	Annual Usage
1	0.01	1200
2	0.03	120000
3	0.45	100
4	1.00	44000
5	4.50	900
6	0.90	350
7	0.30	70000
8	1.50	200

SECTION-D
2Qx15M= 30 Marks

Q	**Read the case & answer the following questions**		

Friedland Timbers asa

Johann Klassen is the Managing Director of Friedland Timbers asa. which makes specialized wood products for the construction industry. He has recently been worried by late deliveries to some important customers. The industry is very competitive, and Johann knows that customers will go to other suppliers if he cannot guarantee deliveries. The marketing manager is particularly upset because he has worked with these customers for a long time, and promised deliveries that were not made.
Johann asked the production manager for an explanation. She told him that ‘Our own suppliers were late in delivering certain types of wood. This shortage of a key raw material disrupted our production plans. We cannot be blamed for this. If anyone in the company is to blame, it is the warehouse manager who does not keep enough stocks of raw materials to cover for late deliveries.’

	Johann then went to the warehouse manager to see what was happening. 'There can't be anything wrong here', he was told. 'Stocks have been climbing for the past year, and last month they were at an all-time high. In part, this is a deliberate decision, as I want to improve service levels to production. In part, though, stocks seem to have just drifted upwards. Now we have high stocks of most items, but there are still occasional shortages. These high stocks are causing me problems with space, and are stretching my budget. I think that the blame lies in purchasing, who do not order the amounts that we request.' Johann saw that some stocks were drifting upwards because purchasing were buying large quantities of some materials. At the same time, they were delaying some purchases, and this produced the shortages. The purchasing manager explained to Johann, 'Let me remind you that eight months ago you instructed me to reduce materials costs. I am doing this by taking advantage of the discounts given by suppliers for larger orders. Often I order more than requested under the assumption that we will need the material at some stage, so I get a discount and the material is already in stock when we need it. Sometimes keeping things in stock would take too much space or be too expensive, so then I might delay an order until I can combine it with others to get bigger discounts.' Johann thought that he was near the source of his problems, and might ask for the purchasing policies to be reviewed. Then he talked to the transport manager who was not so sure. 'It is much more efficient for me to bring larger quantities into the company', he said. 'If you reduce the average order size, the transport costs will rise. Our budget is already being squeezed, as we have to pay for expensive express deliveries of materials that production classify as urgent. If you lower the order size, there will be more shortages, more express deliveries and even higher costs.' Johann talked to some major suppliers to see if they could somehow improve the flow of materials into the company. Unhappily, while he was talking to one company, they raised the question of late payments. This was contrary to Friedland's stated policy of immediate payment of invoices, so he asked the accounting section for an explanation. He was given the unwelcome news that 'The company's inventory and transport costs are so high that we are short of cash. We are delaying payments to improve our cash flow. As it is, we had to use a bank overdraft to pay suppliers for last month.' Later that day Johann found that the late customer deliveries which had started his investigation, were actually caused by poor sales forecasts by the marketing department. They had seriously underestimated demand, and planned production was too low. All the employees at FT were doing their best, but things seemed to be going wrong.		
8	Why do all the logistics costs seem to be rising at the same time?	**15**	**CO4**

9	What do you think are the basic problems in Friedland? & what would you recommend Johann do?	**15**	**CO4**