



UNIVERSITY WITH A PURPOSE

**UNIVERSITY OF PETROLEUM & ENERGY STUDIES**

**End Semester Examination –Dec. 2021**

**Program: MBA LSCM**  
**Subject/Course: Introduction to Supply Chain Management**  
**Course Code: LSCM 7014**

**Semester : I**  
**Max. Marks: 100**  
**Duration : 3 Hours**

**It carries 4 pages.**

**Section A**

- 1. Attempt all the questions. Each question carries 2 marks.**
- 2. Instruction: Complete the statement / Select the correct answer(s)**

<b>S.No.</b>	<b>Questions</b>	<b>Marks</b>	<b>Cos</b>
Q.1	Define AAA model.	2	CO1
Q.2	In Container code, 11 <sup>th</sup> digit is known as .....digit.	2	CO1
Q.3	Washing machine is an example of .....product.	2	CO1
Q.4	As per Weber, .....is the key factor in location decision.	2	CO1
Q.5	MTS strategy is generally practiced for .....	2	CO1
Q.6	Write Huff formula for location decision of a Multiplex in Gurgaon.	2	CO1
Q.7	Mention any two qualitative methods of Demand Forecasting. a) ..... b) .....	2	CO1
Q.8	Define Rim condition and its application.	2	CO1
Q.9	In case, supply from Distribution Centres is more than demand for retail outlets, .....is added to balance the transportation problem	2	CO1

Q.10	ASRS stands for .....and generally practiced in .....	2	CO1																																																	
<b>S.N.</b>	<b>Section B</b> <b>Attempt all the questions. Each carries 5 marks.</b>	<b>Marks</b>	<b>COs</b>																																																	
Q.1	Monthly Demand of a component X used in manufacturing air conditioner is 50 units, ordering cost per order is Rs. 800, storage cost is 8% per unit and 2% is insurance cost during storage. Purchase cost of the component X is Rs.600 per unit. Determine EOQ.	5	CO1																																																	
Q.2	<p>Determine the initial basic feasible solution of the following Transportation Problem by using matrix North West Corner Method (NWCM).</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="2"></th> <th colspan="4">Destination</th> <th></th> </tr> <tr> <th>Source</th> <th>W1</th> <th>W2</th> <th>W3</th> <th>W4</th> <th>Supply</th> <th></th> </tr> </thead> <tbody> <tr> <td>F1</td> <td>10</td> <td>50</td> <td>30</td> <td>30</td> <td>32</td> <td></td> </tr> <tr> <td>F2</td> <td>30</td> <td>30</td> <td>10</td> <td>20</td> <td>17</td> <td></td> </tr> <tr> <td>F3</td> <td>15</td> <td>20</td> <td>20</td> <td>30</td> <td>12</td> <td></td> </tr> <tr> <td>F4</td> <td>20</td> <td>70</td> <td>20</td> <td>40</td> <td>19</td> <td></td> </tr> <tr> <td>Demand</td> <td>23</td> <td>23</td> <td>20</td> <td>14</td> <td>80</td> <td></td> </tr> </tbody> </table> <p>Discuss the steps involved in the determination of IFS.</p>			Destination					Source	W1	W2	W3	W4	Supply		F1	10	50	30	30	32		F2	30	30	10	20	17		F3	15	20	20	30	12		F4	20	70	20	40	19		Demand	23	23	20	14	80		5	CO1
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Q.3	Define types of warehouses. Discuss IT applications in warehousing operations for e-commerce companies. Support your answer with real life examples from FMCG industry.	5	CO2																																																	
Q.4	Discuss Green supply chain Framework. Specify any three best practices of green supply chain to create value to enhance customer satisfaction. Support your answer with live examples from transport/manufacturing sector.	5	CO4																																																	
	<b>Section C</b> <b>Attempt any 3 questions. Each question carries 10 marks</b> <b>Instruction: Write long answer.</b>																																																			
Q.1	How Michael Porter's model contributes to value chain for any organization. Explain with examples from industry.	10	CO3																																																	
Q.2	<p>Attempt the following:</p> <p>a) Pricing decisions for luxurious goods.</p> <p>b) Cralzie Matrix</p>	10	CO4																																																	
Q.3	The following observations were recorded about a group of items in a small scale manufacturing unit. Classify the material in A, B, C categories and draw ABC chart also.	10	CO4																																																	
	<table border="0" style="width: 100%;"> <tr> <td style="width: 33%;">Model No.</td> <td style="width: 33%;">Volume</td> <td style="width: 33%;">Unit Price</td> </tr> </table>	Model No.	Volume	Unit Price																																																
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M101	1200	92
M201	500	144
M301	1550	17
M411	350	40.86
M222	1000	12.5
M322	600	14.10
M433	2000	0.6
M901	100	8.5
M899	1200	0.42
M107	280	0.80

How ABC analysis is advantageous for the warehouse manager?

**Section D**

**Attempt the questions given at the end of the following case:**

**Growing e-commerce in Retailing**

India has an internet user base of about 375 million (30% of population) as of Q2 of 2015. Despite being the second largest user base in world, only behind China (650 million, 48% of population), the penetration of e-commerce is low compared to markets like the United States (266 M, 84%), or France (54 M, 81%), but is growing at an unprecedented rate, adding around 6 million new entrants every month.<sup>[2]</sup> The industry consensus is that growth is at an inflection point. In India, cash on delivery is the most preferred payment method, accumulating 75% of the e-retail activities.<sup>[4]</sup> Demand for international consumer products (including long-tail items) is growing much faster than in-country supply from authorised distributors and e-commerce offerings.

Several Indian e-commerce companies have managed to achieve billion-dollar valuations, including Flipkart, Snapdeal, InMobi, Quikr, OlaCabs, Shopclues and Paytm. India has an internet user base of about 375 million (30% of population) as of Q2 of 2015. Despite being the second largest userbase in world, only behind China (650 million, 48% of population), the penetration of e-commerce is low compared to markets like the United States (266 M, 84%), or France (54 M, 81%), but is growing at an unprecedented rate, adding around 6 million new entrants every month. The industry consensus is that growth is at an inflection point. In India, cash on delivery is the most preferred payment method, accumulating 75% of the e-retail activities. Demand for international consumer products (including long-tail items) is growing much faster than in-country supply from authorised distributors and e-commerce offerings.

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Key drivers in Indian e-commerce are:

- Large percentage of population subscribed to broadband Internet, burgeoning 3G internet users, and a recent introduction of 4G across the country.
- Explosive growth of Smartphone users, soon to be world's second largest smartphone userbase.
- Rising standards of living as result of fast decline in poverty rate.
- Availability of much wider product range (including long tail and Direct Imports) compared to what is available at brick and mortar retailers.
- Competitive prices compared to brick and mortar retail driven by disintermediation and reduced inventory and real estate costs.
- Increased usage of online classified sites, with more consumer buying and selling second-hand goods
- Evolution of Million-Dollar startups like Jabong.com, Saavn, Makemytrip, Bookmyshow, Zomato Etc.

In early June 2013, Amazon.com launched their Amazon India marketplace without any marketing campaigns. In July, Amazon had said it will invest \$2 billion (Rs 12,000 crore) in India to expand business, after its largest Indian rival Flipkart announced \$1 billion in funding. Amazon has also entered grocery segment with its Kirana now in Bangalore and is also planning to enter in various other cities like Delhi, Mumbai and Chennai and faces stiff competition with Indian startups.

Online apparel is one of the more popular verticals, which along with Computers and consumer electronics make up 42% of the total retail e-commerce sales. Niche online merchandising brands like Headbanger's Merch, Redwolf and No Nasties partner with and even help sustain independent musicians. Some established brands like Arvind are now creating clothing lines just for the e-commerce markets. Some of the bigger online retailer like VoxPop Clothing have secured multiple rounds of funding, the last round raising \$1 million from Blume Ventures in 2014. As these niche businesses get popular, they are slowly getting acquired by the big players. BabyOye was acquired by Mahindra Retail, part of the \$17 billion Mahindra Group. Ekstop was acquired by the Godrej Group to complement their offline chain of Nature's Basket stores. Recently GOSF Great Online Shopping Festival was held during Dec 10 to 12, 2014. India will have 100 million online shoppers and the country's e-tailing sector will become a \$15 billion market by 2016, as per a study. The annual online shopping growth report was compiled by Forrester Consulting and Google search trends. The number of

	<p>online shoppers in India is projected to be 35 million in 2014 and it was 8 million in 2012, said Nitin Bawankule, Google India industry director for e-commerce, local and classifieds.</p> <p>Q.A. How e-commerce business is affecting the retail (brick and mortar) industry in India?</p> <p style="text-align: center;">OR</p> <p>Q.B. What would you suggest traditional retailers to adapt supply chain strategies for warehousing and distribution to compete with e-tailers?</p> <p>Q.C. How digitalization and AI applications are going to enhance customer experience with e-commerce companies?</p>	<p>2x15 = 30</p>	<p><b>CO3</b></p> <p><b>CO3</b></p> <p><b>CO2</b></p>
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