PGDM (IB), 2020-22
International Supply Chain & Logistics Management
IB-405
Trimester – IV, End-Term Examination: September 2021

Time allowed: 2 Hrs 30 Min
Max Marks: 50

Roll No: _____

Instruction: Students are required to write Roll No on every page of the Answer Sheet. All other instructions on the question paper / notifications should be followed meticulously.

Sections	No. of Questions to attempt	Marks	Total Marks
A	Minimum 3 question with internal choices and CILO (Course Intended Learning Outcome) covered Or Maximum 6 questions with internal choices and CILO covered (as an example)	3*10 Or 6*5	30
B	Compulsory Case Study with minimum of 2 questions	20	20
			50

Section A

Q1. CILO 01
A G.Noida hospital orders its antibiotics every 4 weeks when a sales person form a pharmaceuticals company visits it. Zilocyine which costs Rs.25 per capsule, is one of its most prescribed antibiotics, with an average daily demand of 50 capsules. The standard deviation of daily demand, derived from examining prescriptions filled over the past 6 months, was found to be 15 capsules. It takes two weeks for the order to arrive. G.Noida hospital will like 99% (z=2.33) of all demand from the prescriptions to be satisfied from stock. The cost ot place an order is Rs.1000 and the holding cost are 20% of the purchase price. The sales person has just arrived and there are currently 1000 capsules in stock. How many capsules should be ordered?
G.Noida Hospital has just hired a consultant who has suggested that instead of ordering at the time of a sales person's visit, the company should monitor its stock regularly and place an order whenever they feel appropriate. Devise the inventory policy. Give your views on the policy suggested by consultant? (10 Marks)
Note- Share your assumptions clearly.

Or

B. One of the world's largest manufacturers of computer chips, Intel needs little introduction. However, the company needed to reduce supply chain expenditure significantly after bringing its low-cost "Atom" chip to market. Supply chain costs of around $5.50 per chip were bearable for units selling for $100, but the price of the new chip was a fraction of that, at about $20.**The Supply Chain Cost Reduction Challenge:** Somehow, Intel had to reduce the supply chain costs for the Atom chip, but had only one area of leverage—inventory.
The chip had to work, so Intel could make no service trade-offs. With each Atom product being a single component, there was also no way to reduce duty payments. Intel had already

whittled packaging down to a minimum, and with a high value-to-weight ratio, the chips' distribution costs could not be pared down any further.
The only option was to try to reduce levels of inventory, which, up to that point, had been kept very high to support a nine-week order cycle. The only way Intel could find to make supply chain cost reductions was to bring this cycle time down and therefore reduce inventory.
I am looking for your advice to reduce the supply chain cost. (10 Marks)
Note- build assumptions around your advice.

Q2.
A. (CILO 02) Asian apparel manufacturers began by assembling pre-cut inputs supplied by the lead firms. Over time, the Asian suppliers acquired more capabilities and transitioned to making complex products (product upgrading) for more sophisticated buyers that resulted in higher returns. As the Asian suppliers' capabilities rose, U.S. buyers farmed out additional functions such as upstream logistics and input procurement to allow Asian producers to functionally upgrade into full package production. In some cases, these firms continued along the functional upgrading trajectory to provide design functions for the lead firms, and even to use these skills and the vertical linkages they developed upstream with local suppliers to become lead firms of their own branded merchandise in domestic and regional markets (channel upgrading). These Asian firms developed the skills needed to interpret designs, make samples, source inputs and monitor quality as a complement to their initial ability to meet buyers' price and time demands, which initially put these dynamic Asian firms on their upgrading trajectory and reaching out the different markets across the globe.

Help in identifying the kind of shift in governance along the two value chains mentioned in the case given above? (10 Marks)
Note: Share the assumption included by you while framing your answer.

Or

B. (CILO 01) JCT Ltd. Owns 500 oil tankers. A large oil company is willing to book the entire fleet in advance at Rs.15000 per tanker per month. JCT has found that on the spot market customer are willing to pay a price of Rs.25000 per truck per month. Demand howsoever is uncertain in spot market. From the past data the owner has estimated that demand in spot markets is likely to follow normal distribution with a mean of 250 tankers and standard deviation of 50. How many tankers should reserve for the spot market? Also suggest other points which should be considered for trade-off to arrive at the desired solution. Don't forget to share the assumptions to evaluate the proposal.
(10 Marks)

Q3. CILO 02 (10 Marks)

Given the data of three denim manufacturing companies in India. Prepare a comparison statement of the Supply chain performance using KPIs given in the data.
Also advice Shopper's Stop as to which of the three companies they should work with improving their revenue and if in case they want to launch a private label of their own, which of these three should be the sourcing point for them.

Arvind Denims

KPI	**2016**	**2017**	**2018**	**2019**	**2020**	**Average**
Inventory Turns	9.13	9.45	7.99	8.12	8.67	8.67
Days Inventory	23.13	27.56	37.11	21.34	32.34	28.30
Days Receivable	6.67	7.11	6.24	3.19	5.34	5.71
Days Payable	45.00	36.00	30.00	33.00	40.00	36.80

Cash Conversion Cycle	-15.20	-1.33	13.35	-8.47	-2.32	-2.79
ROA	7%	8%	6%	9%	10%	8%
ROE	18%	17%	12%	75%	19%	28%

Levi Strauss & Co.

KPI	**2016**	**2017**	**2018**	**2019**	**2020**	**Average**
Inventory Turns	52.34	67.11	37.45	42.55	39.50	47.79
Days Inventory	9.14	11.34	12.45	7.16	19.34	11.89
Days Receivable	17.89	19.23	21.34	31.86	36.55	25.37
Days Payable	70.00	90.15	95.45	85.68	97.66	87.79
Cash Conversion Cycle	-42.97	-59.58	-61.66	-46.66	-41.77	-50.53
ROA	13%	17%	18%	19%	23%	18%
ROE	25%	27%	29%	38%	67%	37%

Nandan Denims

KPI	**2016**	**2017**	**2018**	**2019**	**2020**	**Average**
Inventory Turns	7.00	7.70	6.98	8.10	8.08	7.57
Days Inventory	52.18	47.39	52.33	45.05	45.20	48.43
Days Receivable	21.91	22.38	27.01	26.14	27.08	24.91
Days Payable	103.91	104.66	112.88	100.18	104.04	105.13
Cash Conversion Cycle	-29.82	-34.88	-33.54	-28.99	-31.76	-31.80
ROA	1%	3%	2%	6%	5%	3%
ROE	4%	12%	11%	23%	19%	14%

Section B
(CILO 03)

Chances are, in the past ten months, you haven't visited any restaurants and fulfilled your hunger pangs from food aggregators like Swiggy and Zomato.
Many of the outlets listed on these aggregators only serve online deliveries and don't provide dine-in services, i.e., they operate on a 'cloud kitchen model.'

Online food aggregator Swiggy has launched its cloud kitchen, 'The Bowl Company' in select areas of Bengaluru. Swiggy's latest move is aimed at creating a basketful of options to meet consumer demand in select areas but interestingly it also puts it against listed businesses on its site such as FreshMenu.

"We are looking at extending the food tech and delivery continuum by creating a platform where multiple brands can work from a single kitchen (external or Swiggy) to meet consumer demand in certain pockets of the city, "a Swiggy spokesperson told ET.

The spokesperson further added, "These experiments are conducted on a small scale to ensure all problems are fixed in the test phase itself. We have been testing cloud kitchens for three months now. We hope to use this initiative to provide consumers in all areas with the best possible options for them to order from."

In 2015, the company began attracting external investments. The first was a $2 million investment from Accel and SAIF Partners, along with an additional investment from Norwest Venture Partners. The next year, Swiggy raised $15 million from new and existing investors,

including Bessemer Venture Partners and Harmony Partners. In 2017, Naspers led an $80 million funding round into Swiggy. Swiggy received $100 million from China based Meituan-Dianping and Naspers in 2018 and a string of investments boosted the company's valuation to over a $1 billion. In February 2019, Swiggy acquired Bengaluru-based AI startup Kint.io. In April 2020, Swiggy received around $43 million funding which valued the company at $3.6 billion. Swiggy acquired Bangalore-based Asian food start-up 48East in 2017. Swiggy later acquired Mumbai based Scootsy Logistics, a struggling food and fashion delivery service. It also went on to acquire a milk delivery start-up in Mumbai called SuprDaily in an all cash deal. In 2019, the company invested Rs 31 crore in Mumbai-based ready-to-eat food brand Fingerlix. Swiggy planned to transition Scootsy's partners, fleet and nudge consumers to its app and shut Scootsy by June-end 2020.

Growth Drivers –

♣ Changing food consumption habits – Before the COVID-19 pandemic struck, the online food delivery business was on the rise due to changing food consumption habits. The urban middle class is warming to ordering food online due to various factors like the availability of a wide variety of menus, aggregator-driven discounts, convenience, etc.

♣ Increased adoption of food aggregators – Food aggregators like Swiggy and Zomato have penetrated beyond Tier 1 and Tier 2 cities. Small restaurants are also finding value in being listed on these platforms.

♣ Covid-19 Pandemic – Though the lockdown has been lifted across India and dine-in services have resumed at 50% capacity in many restaurants; consumer confidence is still low. Sensing this, the many established F&B players in the industry focus on pivoting to a multi-brand, delivery-only model. For example, Massive Restaurants that operates fine-dining restaurants like Pa Pa Ya, Farzi Café, and Made in Punjab are planning to build cloud kitchens as they are cost effective and scalable.

Challenges faced –

1. Amazon, Jio and Ola entering the food aggregator business – After Uber’s exit from the food tech space, the market has consolidated, with Swiggy and Zomato emerging as the two major market players. Amazon, Jio and Ola have entered the market with its deep pockets, loyal consumers, and a brilliant underlying platforms. Discovery on the food aggregator platform is an essential driver of orders for the cloud kitchens.
2. The online food delivery industry structure – To capture market share food Swiggy is still burning cash on each order they fulfil. Once they stop subsidizing the platform’s consumer side, the cost of fulfilment will rise, and will severely affect the profitability of these kitchens that operate on razor-thin margins.
3. The Paradox of Choice – The cloud kitchens can make multiple cuisines under the same roof. However, having too many cuisines prepared at the same place is not necessarily a good thing for the food. Cloud kitchens need to specialize in cuisines and create a loyal customer base.

Q1. The cloud kitchen needs to increase the number of deliveries from 45000 to 3 Lakh per day in the next year. There are additional locations and cuisines that will be added in next year. How will you ensure that Bowl Company is ready for the challenge. (10Marks)

Q2. You are the CFO of the Bowl Company, a wholly owned subsidiary of Swiggy. What will you do to protect your margins (10 Marks)