Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY
MBA – SEMESTER –II-EXAMINATION – WINTER-2022

Subject Code: 1529303 Date: 15/12/2022
Subject Name: Global Operations Management
Time:02:30 PM to 05:30 PM Total Marks: 70

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q. No.			Marks
Q.1		1. What is Operations management? 2. Mention the stages of Product Life Cycles. 3. What is Quality Function Deployment? 4. Name the tools of TQM (Total Quality Management). 5. Name the methods for evaluating location alternatives. 6. What are the different types of Layout? 7. What is Supply Chain Management?	**14**
Q.2	**(a)**	Name the 10 decision areas of operations management.	**07**
	(b)	List six reasons to internationalize operations.	**07**
		OR	
	(b)	In what way is product strategy linked to product decisions?	**07**
Q.3	**(a)**	List the three concepts central to Taguchi's approach.	**07**
	(b)	Explain: The designing of Goods is different from Services.	**07**
		OR	
Q.3	**(a)**	What is effective capacity? Give an example for the same.	**07**
	(b)	What are the major factors that firms consider when choosing a country in which to locate?	**07**
Q.4	**(a)**	List the techniques used by service organizations to select locations.	**07**
	(b)	What are the objectives of logistics management?	**07**
		OR	
Q.4	**(a)**	What is pure strategies? Provide a few examples.	**07**
	(b)	Does lean production work in the service sector? Provide an illustration.	**07**

Q.5 **Case Study: JIT at Arnold Plamer Hospital**

Orlando's Arnold Palmer Hospital, founded in 1989, specializes in treatment of women and children and is renowned for its high-quality ranking (top 10% of 2000 benchmarked hospitals), its labor and delivery volume (more than 13,000 births per year, and growing), and its neonatal intensive care unit (one of the highest survival rates in the nation) but quality medical practices and high patient satisfaction require costly inventory-some $30 million per year and thousands of SKUs. With pressure on medical care to manage and reduce costs, Arnold Palmer Hospital has turned towards controlling its inventory with just-in-time (JIT) techniques. Within the hospital, for example, drugs are now distributed at nursing workstations via dispensing machines (almost like vending machines) that electronically track patient usage and post the related charge to each patient demand and prescriptions written by doctors.

To address JIT issues externally, Arnold Palmer Hospital turned toward a major distribution partner, McKesson General Medical, which as a first-tier supplier provides the hospital with about one quarter of all its medical/surgical inventory. McKesson supplies sponges, basins, towels, mayo stand covers, syringes and hundreds of other medical/surgical items. To ensure coordinated daily delivery of inventory purchased from McKesson, an account executive has been assigned to the hospital on a full-time basis, as well as two other individuals who address customer service and product issues. The result has been a drop in Central Supply average daily inventory from $400,000 to $114,000 since JIT.

JIT success has also been achieved in the area of customer surgical packs. Custom surgical packs are the sterile coverings, disposable plastic trays, gauze, and the like, specialized to each type of surgical procedure. Arnold Palmer Hospital uses 10 different custom packs for various surgical procedures. "Over 50,000 packs are used each year, for a total cost of about $1.5 million," says George DeLong, head of Supply Chain Management. The Packs are not only delivered on a JIT manner but packed that way as well. That is, they are packed in the reverse order they are used so each item comes out of the pack in the sequence it is needed. The packs are bulky, expensive, and must remain sterile. Reducing the inventory and handling while maintaining an assured sterile supply for scheduled surgeries presents a challenge to hospitals.

Here is how the supply chain works: Custom packs are assembled by a packing company with components supplied primarily from manufacturers selected by the hospital, and delivered by McKesson from its local warehouse. Arnold Palmer Hospital works with its own surgical staff (through the Medical Economics Outcome Committee) to identify and standardize the custom packs to reduce the number of custom packs SKUs. With this integrated system, pack safety stock inventory has been cut to one day. The procedure to drive the custom surgical pack JIT system begins with a "pull" from the doctor's daily surgical schedule. Then, Arnold Palmer hospital initiates an electronic order to McKesson between 1:00 and 2:00 P.M daily. At 4:00 A.M. the next morning McKesson delivers the packs. Hospital personnel arrive at 7:00 A.M and stock the shelves for scheduled surgeries. McKesson then reorders from the packing company, which in turn "pulls" necessary inventory for the quantity of packs needed from the manufacturers.

Arnold Palmer Hospital's JIT system reduces inventory investment, expensive traditional ordering, and bulky storage, and supports quality with a sterile delivery.

(a) What do you recommend be done when an error is found in a pack as it is opened for an operation? **07**

(b) How might the procedure for custom surgical packs described here be improved? **07**

OR

(a) When discussing JIT in services, the text notes that suppliers' layout, inventory, and scheduling are all used. Provide an example of each of these at Arnold Palmer Hospital? **07**

(b) When a doctor proposes a new surgical procedure, how do you recommend the SKU for anew custom pack be entered into the hospital's supply chain system? **07**

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