National University of Modern Languages

Assignment #4

Subject: **Business Process Engineering**

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Write a note on JIT.

JIT, or Just-In-Time, is a production strategy that aims to minimize inventory levels and production lead times by producing right items in the right quantities at the right time at the right place. This approach is commonly associated with manufacturing and supply chain management, but it has also found applications in other areas such as software development.
JIT also involves elimination of waste in production effort and the timing of production resources.

JIT can be divided into two terms:

1. **Big JIT**

It is a philosophy of operations management that seeks to eliminate wastes in all aspects of a firms production activities.

2. **Little JIT**

It focuses more narrowly on scheduling goods inventory and providing service resources where and when needed.

Key features of JIT include:

1. **Pull System:**

JIT operates on a pull system, where production is initiated in response to actual customer demand. This is in contrast to a push system, where items are produced based on forecasts or a predetermined schedule. In a pull system, products are made only when there is a specific order or demand, ensuring that resources are used efficiently.

2. **Continuous Improvement :**

Continuous improvement is a fundamental principle of JIT. It involves constantly seeking ways to enhance processes, reduce waste, and improve overall efficiency. The Kaizen philosophy encourages incremental improvements from everyone in the organization, leading to a culture of ongoing optimization.

3. **Waste Reduction (Muda):**

JIT aims to eliminate various forms of waste, known as "muda," including overproduction, waiting times, excess inventory, unnecessary transportation, over-processing, and defects. By minimizing waste, JIT contributes to cost reduction and increased efficiency.

4. Minimization of Inventory:
One of the primary goals of JIT is to reduce or eliminate the need for holding large inventories of raw materials, work-in-progress, or finished goods. This helps in freeing up capital, reducing storage costs, and minimizing the risk of obsolescence.

5. Supplier Relationships:
Strong relationships with suppliers are crucial in a JIT system. Close collaboration with suppliers ensures a steady and timely flow of high-quality materials. In some cases, suppliers may even deliver materials directly to the production line, eliminating the need for warehousing.

6. Eliminate waste in processing:
Emphasis on high-quality standards is another critical aspect of JIT. Detecting and addressing defects early in the production process is essential to avoid disruptions and wastage.

7. Level Scheduling Production
Leveling means both the volume of production and the types of products are evenly distributed over the operation time. It requires balancing the capabilities of various stages in the production process and also requires standardized operations and processing procedures.

Advantages of Just in Time

There are several advantages which have been beneficial for organizations who have adopted JIT. Some of the advantages of JIT are mentioned below.

1. Reduced setup time and low wastage.
2. The flow of goods from warehouse to shelves improves.
3. Employees with multiple skills are used more efficiently.
4. Increased emphasis on supplier relationships.
5. Minimizes storage space needed thereby saving warehousing costs.
6. Smaller chance of inventory breaking/expiring.

Drawbacks of Just in Time

1. Just-in-time makes it very difficult to rework orders, as the inventory is kept to a bare minimum and only based on the customers' original orders.

2. The model is dependent on suppliers' performance and timeliness, which are hard to ensure. Additionally, the manufacturer needs to be able to cover any sudden increases in the price of raw materials, since they cannot wait to order during better pricing.

3. Since the JIT model requires a lot of shipping back and forth between the supplier, manufacturer, and customer, it can have detrimental effects on the environment due to over consumption of fossil fuels and packaging.

4. In case of disruptions, a JIT model can have a major impact on the business. Since there is no excess stock to fall back on, sales may come to a halt.

5. JIT requires strong relationships and reliability from suppliers. If a supplier fails to deliver materials on time or with the expected quality, it can disrupt the entire production process.

THE END