**MODULE 1 ASSIGNMENTS**

1. Define logistics. What are the advantages and disadvantages of logistics to an organization?

Well, logistics has been defined differently through the time, as it has evolved/developed and its importance acknowledged from companies and suppliers and I tried to list all the definitions for logistics

1-is the process of strategically managing the procurement, movement storage of materials, parts and finished inventory and the related information flow through the organization and its marketing channels in such a way that current and future profitability are maximized through the cost-effective fulfillment of orders.

2- More appropriately defined as : the means where by the needs of customers are satisfied the coordination of the material and information flows that extend from the marketplace through the firm and its operations and beyond that to suppliers, and this what makes logistics also important to an organization.

Also another, clearer definition for logistics: it is the function made up of many sub-functions and many sub-systems of which has been and may still be a distinct management operation, as these different functions correlate and affect each other when it comes to logistics planning.

And from another point of view, logistics is the management of all activities which facilitate movement and the coordination of supply and demand in the creation of time and place utility.

Logistics might be seen differently from the point of view of business and economy then it is defined as an important activity making extensive use of the human and material resources that affect a national economy.

Finally, an appropriate modern definition that applies to most industry might be that logistics: is the efficient transfer of goods from the source of supply through the place of manufacture to the point of consumption in a cost effective way whilst providing an acceptable service to the customer in the right place at the right time.

And technically speaking, simply:

Logistics=materials management + distribution

Generally speaking the core value/benefit/**advantage of logistics** is achieving cost effectiveness and customer service and in other words, reduce the unit cost and meeting the customers’ needs

Actually one of the most important advantages of logistics is adding a competitive advantage over competitors in the market in terms of customer preference.

Logistics support the organizations ability to differentiate itself in the eyes of customers from its competitors, also, by operating at a lower cost and accordingly a greater benefit/profit.

The competitive advantages of logistics derives from either cost advantage or value advantage or ideally both.

**Cost advantage**: in today’s world much of the cost of a product lies outside the four walls of the business in the wider supply chain, that’s why the traditional concept about seeking a great sales volume will reduce the costs is no longer applicable nowadays.

Instead better logistics is the main factor to significant cost reduction of units through increasing efficiency and productivity of supply process.

**Value advantage:** as the markets are becoming more service sensitive, logistics is able to add value through differentiation , alsoit is mainly about adding value through providing customer services, it is more important in today’s market where most of the products are similar on different levels but what really differentiate on from another is the customer services offered with the product, as the service itself became a (commodity) that customers looking for i.e. availability of a variety/range of options/versions/colors and prices, delivery of the product in the appropriate condition and required location and after sales services like maintenance guarantee and so on, and this can be accomplished through efficient logistics only (which integrates material management and distribution) , and it means that branding and keeping a flawless “image” alone is no longer an advantage for suppliers.

The main **disadvantage**, I assume that logistics is no longer a disadvantage as most of the companies are investing in the advantage solely, but still, the organization can no longer act as an isolated and independent entity in competition with other similarly stand-alone organizations, alternatively, they have and need to create value delivery systems that are more responsive to fast changing markets and are much more consistent and reliable in the delivery of that value and it requires that the supply chain as whole to focus on the achievement of these goals.

2. Why should an organization use Just in Time? Give its advantages and Dis disadvantages.

JIT is one of the integrated systems of logistics and distribution **which enable the organizations to response quickly** to the customers’ demands based on customer’s wants/needs solely,

The approach of JIT is to provide a production/manufacturing system that eliminates all activities that are not adding value to the final product or allowing the continuous flow of material by cutting the costly and wasteful elements within the production process.

The **advantages** are:

1. The production of goods the customer wants/based on needs/orders only. (**eliminate unnecessary stock**)
2. The production of goods on time/when the customer wants them. (**reduce lead times**)
3. The production of perfect/high quality goods.
4. Elimination of waste as mentioned earlier i.e. labor, inventory, handling, storage..(**eliminate unnecessary stock and waste within the operation**)

The **disadvantages** of JIT:

1-it leads to increased transport flows due to the need of smaller but more frequent deliveries of goods to the customer.

2-shifting costs elsewhere in the supply chain by forcing suppliers or customers to carry on the inventory.

3. What are inventories? How important are they to an organization?

Inventories show/resembles the available stock/asset numbers/count or the stock available for sale/stored or sold and their movements dates and source history in details(it gives the organization the chance to check the rhythm of their sales/stock/product storage/movements by means the units IN and OUT from their store or different stores in different locations or on different points on the supply chain) it gives a clear idea about the time consumed between IN and OUT, it shows clearly if the project is suffering from an overstock (less orders from customers) or facing shortage (increase of inventory turn) by means increase of demand, also indicates the need sometimes to warehouse storage capacity that might need to be increased due to influx of inbound units or sign of lack of demand, also important to evaluate sometimes the performance of warehouse staff by measuring the time consumed in each order cycle (time consumed from one order and another) and sometimes indicate a problem in certain area within the supply chain like shortage or overstock or lots of expired drugs due to delayed supply and the latter example is applied on certain products, accordingly inventories plays a major role for the organization’s project performance and activities.

4. Why is planning essential in logistics and supply chain management?

Planning is truly essential, as it integrates various distribution and logistics components into a complete working structure that enables the overall system to run at the optimum, also it tackles the interrelationships between different elements of logistics i.e. delivery, transport and storage that must be considered within the context of the broader supply chain, accordingly, the total system is put into account and not just an individual element or subsystem in isolation.

This integration called (sub-optimization) which is only can be seen when efficient planning is designed considering all elements of logistics and wider supply chain.

Planning also gives the chance to identifying and determining cost trade-offs to be available for analysis which is providing a positive benefit to the logistics system as a whole.

Again, essentially planning is important due to the fact that the complexity and overlapping of the supply chain stages that interrelate in the middle and it goes in align with the target of supply chain which is to unify the supply plans into one plan/complete integrated system to reduce costs and enhance the performance as a whole.

Planning gives the chance to control/monitor/audit the operations of logistics and distribution in addition, it give the operation the needed flexibility for continuous review, revision and adaptability to continual change on customer demands and product availability