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Business, Marketing

Q1. State the important considerations for locating an automobile plant. A1. Automobile plant automated flaw lines, automatedassembly lines, flexible manufacturing systems, global transition rapid prototyping. Building manufacturing flexibility things are necessity. About the automated flow lines we can say it is a machine which is linked by a transfer system which moves the parts by using handling machines which are also automated, we have an automated flow line. Human intervention ma is needed to verify that the operations ate taking place according to standards.

When these cab be achieved with the help of automation and the processes are conducted with self regulation, we will have automated flow lines established. In fixed automation or hard automation, where one component is manufactured using services operations and machines it is possible to achieve this condition. We assume that product life cycles are sufficiently stable to interest heavily on the automate flow lines to achieve reduces cast per unit. Product layouts ate designed so that the assembly tasks are performed in the sequence they are designed at each station continuously.

The finished item came out at the end of the line. In automated assembly lines the moving pallets move the materials from station to station and moving arms pick up parts, place them at specified place and system them by perusing, riveting, & crewing or even welding. Sensors will keep track of there activities and move the assembles to the next stage. The machines are arranged in a sequence to perform operations according to the technical requirements. The tools are loaded, movements are effected, speeds controlled automatically without the need for worker’s involvement.

The flexibility leads to better utilization of the equipments. It reduces thenumbers of systems and rids in reduction of investment as well as a space needed to install them. One of the major cancers of modern manufacturing systems is to be able to respond to market Demands which have uncertainties. Prototyping is a process by which a new product is developed in small number so as to determine the suitability of the materials, study the various methods of manufactured, type of machinery required and develop techniques to over come problems that my be encountered when full scale manufacture is undertaken.

Prototypes do meet the specification of the component that enters a product and performance can be measured on these. It helps in con be reforming the design and any shortcomings can be rectified at low cost. Flexibility has three dimensions in the manufacturing field. They are variety, volume and time. There demands will have to be satisfied. In that sense they become constraints which restrict the maximization of productivity. Every business will have to meet the market demands of its various products in variety volumes of different time.

Flexibility is also needed to be able to develop new products or make improvements in the products fast enough to cater to shifting marker needs. Manufacturing systems have flexibility built into them to enable organization meet global demand. You have understood how the latest trends in manufacturing when implemented help firms to stay a head in business Q2. Explain essentials of Project ManagementPhilosophyA1. Project Management Philosophy A project never goes smooth. It brings unexpected problems

during the execution of any phase that marks a difference between the planned activities and actual executions.

The deviations enforce re-planning of further activities so that the extra budget and time spent on previous activities can be compensated by revised project plan. A loser is a loser only when he realizes it and gives up. As long as one thinks he has the capability of changing lose situation to a winning situation, he is never a loser. Project management philosophy emphasizes on sharing the problems with all stakeholders and team members so that different brains come out with different responses and any of the response(s) can become the best solution(s).

Challenge sharing definitely brings out a solution from somebody else having a different set of experience and exposure who has already been into such a situation and has come out of it already. Sharing problems and challenges saves one from re-inventing the wheel. Documentation sharing and a knowledge sharing platform make a strong basis for keeping all on the same wheel. Managers mostly focus on driving out results from the teams rather than enabling and empowering them to become self driven. Energy flows automatically and uncontrolled. Results start coming out without reaching the deadlines and prior to demand.

It depends on managers that by empowerment they start preparing or building leaders within the teams. A combination of leaders, if synergized properly, propels a resultant progress of the project. Managers become critical key in engaging people in the project. A high level of engagement is lodged in the team members via project manager. As long as the project manager is able to drive teams, it makes them engaged to the project. On

the other hand if project manager inculcates and inspires team members to self-engage themselves, the team members do not depend to be driven by project manager.

Q3. Several different strategies have been employed to assist in aggregate planning. Explain these in brief A3. Planning is a primary managementresponsibility. Aggregate planning is concerned with organizing the quantity and timing of production over a medium period of time up to eight to ten months with undetermined demand. Specifically aggregate planning means combining all of an organization`s resources into one aggregate production schedule for a predetermined intermediate time period. The objective of aggregate planning is to maximize esources while minimizing cost over the planning period. The aggregate production plan is midway between short-range planning and long-range planning. Aggregate planning includes the following factors: 1. Work force size and composition 2. Demand forecasts and orders 3. Raw material planning 4. Plant capacity management 5. Utilizing outside subcontractors 6. Inventory management Aggregate planning is the link between short-term scheduling and long-term capacity planning. What are aggregate planning strategies? There are three types of aggregate planning strategies: Pure Strategy.

In this strategy, only one production or supply factor is changed. Mixed Strategy. This strategy simultaneously alters two or more production or supply factors or some combination. Level Scheduling. This strategy has been adopted by the Japanese and it embodies maintaining constant monthly production schedules. What aggregate planning strategies influence demand? Aggregate planning can influence demand in the following ways: 1.

Pricing strategies. Pricing can be used to increase or reduce demand. All things being equal, increasing prices reduces demand while lowering prices will increase demand. . Advertising and promotion strategies. Advertising and promotion are pure demand management strategies in that they can increase demand by making a product or service better known as well as positioning it for a particular market segment. 3. Delayed deliveries or reserving orders. Managing future delivery schedules is a strategy for managing orders when demand exceeds capacity. The net effect of delayed deliveries, or back ordering, and reservations is to shift demand to a later period of time, often to a more slack period, which provides a smoothing effect for overall demand.

However, the negative is that a percentage of orders will be lost as consumers are unwilling or unable to wait the additional amount of time. 4. Diversifying the product mix. Product mix diversification is a method used to offset demand seasonality. For example, a lawn mower manufacturing company may diversify intosnowremoval equipment to offset the seasonality of the lawn mower industry. What aggregate planning strategies influence supply? Aggregate planning is also used to manage supply considerations by using the following strategies: 1.

Subcontracting (outsourcing). Subcontracting is a method of increasing capacity without incurring large capital investment charges. It can turn the competitive advantage of other corporations to the contracting organization`s advantage. However, subcontracting can be costly, and also reveals part of the business to potential competitors. 2. Overtime and idle time. A direct short-term strategy for managing production capacity is to

either increase or decrease the number of the work force. This strategy has the advantage of utilizing the currently existing work force.

However, overtime is expensive and can produce job burnout if relied upon too extensively. On the other hand, enforcing idle time on the work force can result in resistance as well as a drop in morale. 3. Hiring and laying off employees. Hiring and laying off employees is a medium- to long-term strategy for increasing or decreasing capacity. Hiring employees usually involves the cost of training while laying off employees can incur severance charges. Laying off employees can also cause labor difficulties with unions and reduce morale 4. Stockpiling inventory.

Accumulating inventory is a strategy for smoothing variances which may occur between demand and supply. 5. Part-time employees. Certain industries have seasonal requirements for lower skilled employees. Aggregate planning can be used to manage these seasonal requirements. What is the charting method of aggregate planning? Charting is a highly utilized trial-and-error aggregate planning method. It is relatively simple to use and is easily understood. Essentially, the charting approach uses a few variables in forecasting demand, applying current production capacity.

While the charting method does not assure an accurate prediction, it is simple to implement requiring only minimal calculations. But trial and error method does not provide an optimal solution. The charting method requires five steps to implement: 1. Calculate each period`s demand. 2. Calculate each period`s production capacity for regular time, overtime, and subcontracting. 3. Determine all labor costs including costs for hiring and layoffs as well as the cost of holding inventory. 4. Evaluate organizational

employee and stock policies. . Create optional policies and evaluate their costs. EXAMPLE 1. 30 A Florida men`s suit manufacturer has created expected demand forecasts for the period June-January, as shown in Table 1. 2. The daily demand is calculated by dividing the total expected demand by the number of monthly working days: AVERAGE DEMAND = TOTAL EXPECTED DEMAND / NUMBER OF PRODUCTION DAYS FIGURE 1. 6 MONTHLY AND AVERAGE MEN`S SUIT DEMAND The graph in Figure 1. 6 illustrates that there is a substantial variance between the monthly and average men`s suit demand.

What are the costs of aggregate planning? Aggregate planning is a systems methodology having major organizational impacts. Every strategy has associated costs and benefits. Increasing hiring means increasing training costs and incurring associated employment benefit costs. Increasing inventory increases carrying costs consisting of capital and storage costs, deterioration, and obsolescence. Using part-time employees involves the costs and risks of using improperly trained and inexperienced personnel as well as creating possible union conflicts.

Using subcontractors has the cost of exposing an organization to potential competitors. EXAMPLE 1. 31 Using the data in example 1. 30, it is possible to develop cost estimates for the men`s suit manufacturer. Basically, the manufacturer has three choices: 1. The manufacturer can meet expected monthly production fluctuations by varying the work force size, hiring and laying off employees as needed. In this scenario, an assumption is made that the men`s suit manufacturer has a constant staff of 55 employees. 2.

Another alternative is to maintain a constant work force of 51 employees and subcontract for additional expected demand. 3. A third alternative is to maintain a work force of 69 employees and store suits during the slack demand months. Organizational Costs THREE PLAN SUMMARY COSTS In this example, the best production plan is plan 3 which maintains a work force of 69 employees and stores men`s suit inventory during low demand months. Q 5: Explain the basic competitive priorities considered while formulating operationsstrategy by a firm? Answer:

Operations strategy reflects the long-termgoalsof an organisation in its corporate strategy, a clear understanding of the operating advantages and a good cross functional coordinationbetween functional areas of marketing, production, finance, and human resources departments arerequired. Operating advantages depend on its processes and competitive priorities considered whileestablishing the capabilities. The basic competitive priorities are: Cost, Quality, Time, Flexibility Cost: Cost is one of the primary considerations while marketing a product or a service.

Being a lowcost producer, the product accepted by the customer offers sustainability and can outperformcompetitors. Lower price and better quality of a product will ensure higher demand and higherprofitability. To estimate the actual cost of production, the operations manager must addresslabour, materials, scrap generations, overhead and other initial costof design and development, etc. Quality: Quality is defined by the customer. The operations manager looks into two importantaspects namely high performance design and consistent quality.

High performance design includessuperior features, greater durability, convenience to services, etc where as consistent designmeasures the frequency with which the product meets its design specifications and performs best. Time: Faster delivery time, on-time delivery, and speedy development cycle are the time factors thatoperations strategy looks into. Faster delivery time is the time lapsed between the customer orderand the delivery. On-time delivery is the frequency with which the product is delivered on time.

Thedevelopment speed is the elapsed time from the idea generation up to the final design andproduction of products. Flexibility: Flexibility is the ability to provide a wide variety of products, and it measures how fast themanufacturer can convert its process line used for one product to produce another product afterWhile customisation is the ability of the firm to satisfy the specific needs of each its customer, thevolume flexibility is the ability to accelerate or decelerate the rate of production to handle thefluctuations in demand. For example, the production of fertilisers of different specifications andapplications.