Assignment 3
Course Code (Name) : BM301 (Production and Operations Management)

Course Covered   : Complete

Instructions:
- This assignment need not be submitted but will be taken up for discussion in the class on Monday, the 4th of May, 2009
- Students who do not complete this assignment will not be allowed to take part in the discussion

1. Operations Managers need two major categories of management skills - technical competence and behavioural competence. Elaborate on these two. How these two skills also contribute to making a better leader?

2. Eight critical dimensions or categories have been often referred to when it comes to strategic quality management. These are performance, features, reliability, conformance, durability, serviceability, aesthetics and perceived quality.
   a. Explain these dimensions.
   b. Do you agree that these dimensions are subjective in nature? Justify.
   c. What are the implications of your answer to the above question on strategic quality management?

3. Reliability is the probability that an engineering system will perform its intended function satisfactorily (from the viewpoint of the customer) for its intended life under specified environmental and operating conditions. Maintainability is the probability that maintenance of the system will retain the system in, or restore it to, a specified condition within a given time period. Availability is the probability that the system is operating satisfactorily at any time.
   a. Elucidate on the inter-relationships among these three.
   b. Two measures widely used in Maintenance Management are MTBF (Mean Time Between Failure) and MTTR (Mean Time to Repair). Of the above three probabilities, MTBF measures which and MTTR measures which?

4. An aggregate planner requires the following information:
   - ✓ Demand forecast F_t for each period t in the planning horizon that extends over T periods
   - ✓ Production costs which include labour costs (regular / overtime), cost of subcontracting / outsourcing, cost of changing capacity (cost of hiring / layoff, cost of adding / reducing machines)
   - ✓ Inventory holding cost
   - ✓ Stockout or backlog cost
   - ✓ Constraints such as limits on overtime, limits on layoffs, limits on capital available, limits on stockouts and backlogs and constraints from suppliers to the enterprise

How do the information so obtained, specifically the constraints help in creating an aggregate plan?

5. Following are some of the decisions in the mentioned functional areas that utilize forecasts and can be enhanced through collaborative forecasting among supply chain partners:

Functional Area	Decisions required to be taken
Production	Scheduling, Inventory Control, Aggregate Planning, Purchasing
Marketing	Sales-force allocation, Promotions, New Product Introduction
Finance	Plant/equipment investment, Budgetary Planning
Personnel	Workforce Planning, Hiring, Layoffs

Why is it essential that these decisions should not be treated as separate decisions to make? The discussion should bring to the fore the importance of collaboration in meeting supply chain as well as organizational objectives.

Quality Enhancement through Customer Support based on Online Information Systems

"Quality is the supplying of goods which do not come back, to customers who do "

The above is a very important quality definition from a customer viewpoint. It also emphasizes the importance of customer support. Though, customer support as a concept has been in existence for long; over a period of time, the notion of customer support has undergone a sea change with competition and customer expectation reaching new heights. In this scenario, Online Information Systems can help in a big way as suggested below:

- ✓ Increase the number of problems and inquiries resolved at the first point of contact by empowering both customers and agents with accessible, accurate, understandable, and complete information.

- ✓ Reduce contact time by improving both the speed of response and ease of use through continuous process improvement, efficient database access, and intuitive user interface design of the online IS.

- ✓ Establish robust market intelligence and product or service feedback loops throughout the organization.

- ✓ Facilitate analysis of customer complaints and service delivery failures for management reporting purposes. Also assist in the analysis and integration of customer satisfaction survey results.

- ✓ Provide 24 X 7 customer support.

How the online IS be made better?

- ✓ Determine missing or inaccurate online policies and procedures, user instructions, troubleshooting scenarios, contact categories, and other information that may be relevant to customer contacts in the online IS.

- ✓ Assist process owners in identifying inefficient online system process and suggest improvements by means of system change requests and cost/benefit analysis to make a better online IS.

- ✓ Continuously update relevant information

This topic has been prepared with the help of a presentation made by Prof. Deepali Singh of ABVP - IIITM, Gwalior

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- ✓ **Take a bag with you whenever you go shopping to the market. That way, you avoid bringing polybags which ultimately finds its way to the waste basket. These are not bio-degradable and harm the environment.**

- ✓ **Take the print out of this assignment in a paper which is already used on one side. This can help save paper and associated costs. In fact, make it a habit to always use papers to the optimum. Even envelopes just thrown away can be used to do rough work.**

- ✓ **Check to see that all electrical appliances are switched off when they are not being used. Switch to CFLs. You can do a lot to save power.**

- ✓ **Make it fashionable to be environmentally conscious and aware. You can make a real difference to the only place we have to live called EARTH.**