

JUN-2010

INDIAN INSTITUTE OF MATERIALS MANAGEMENT
Post Graduate Diploma in Materials Management

PAPER 16
BUINESS STRATEGIES & WORLD CLASS PRACTICES

Date: 17.6.2010
Time: 2.00pm to 5.00pm

Max. Marks 100
Duration 3 hours

Instructions

1. The question paper is in three parts
2. Part A is compulsory. Each question carries one mark. **Total marks-32**
3. In Part B answer 3 questions out of 5. Each question carries 16 marks **Total marks-48**
4. Part C is a case study with sub questions and it is compulsory. **Total Marks-20**

PART A

Q.1. Fill in the blanks. (Please do not reproduce the statement)

- i) Information age is dominated by _____ workers.
- ii) Hall's frame work of value added manufacturing is described in three overlapping concepts, TQM, JIT and _____
- iii) A regime of comprehensive maintenance activity, carried out largely by the operator of the equipment is called _____.
- iv) Company's ability to introduce new products and modification to existing products is called _____ flexibility.
- v) The two pillars of Toyota production system are JIT and _____
- vi) To make fundamental improvement in the production process, the _____ must be distinguished from _____ and analyze them separately.
- vii) In world class manufacturing, operators are taught to be capable of handling _____ processes.
- viii) The mechanism used for pulling materials in JIT system is called _____

Q.2. State True or False (Please do not reproduce the statement)

- i) In information age companies could gain sustainable competitive advantage through deploying new technology into physical assets rapidly.
- ii) The white collar workers are now called knowledge workers.
- iii) The inventory turnover of raw material and work in progress is 80/100 for a Class A world class manufacturer.
- iv) Time based competition refers to cycle time reduction in the entire value chain.
- v) Beneficial supplier relationships may be created using techniques like single sourcing, certification and openness.
- vi) The order fulfillment process as well as the product development process must be continuously shortened to achieve the world class status.
- vii) Shingo's zero quality control consists of source inspection and use of poka yoke.
- viii) Mass customization can be achieved through improving flexibility.

Q.3. Expand the following

- i) SBR

- ii) ESI
- iii) AGV
- iv) PPC
- v) CUSUM
- vi) TQC
- vii) PDM
- viii) RDBMS

Q.4. Match A and B

- | A | B |
|---------------------------------|-------------------------------|
| i) Industrial age | a) Load-smooth production |
| ii) Globalization | b) Deming |
| iii) JIT | c) Control chart |
| iv) Production leveling | d) Bar code |
| v) System of profound knowledge | e) Waste elimination |
| vi) Shewart | f) Reducing set up time |
| vii) Universal product code | g) New space-time combination |
| viii) SMED | h) Economies of scale |

PART B

Q.4 Explain the issues involved in the strategic planning for world-class manufacturing.

Q.5. Explain world class manufacturing based on the following

- a) Schonberger's model
- b) Gunn's model

Q.6. a) Explain Deming's system of profound knowledge.

b) Explain Shingo's approach to quality management

Q.7. a) What is Cellular Manufacturing? What are the advantages and disadvantages?

b) What is SMED? What are the steps involved in Making SMED operational?

Q.8. Write short notes any four

- a) Kanban
- b) Rapid prototyping
- c) Supplier Interface
- d) Benchmarking
- e) Material processing and handling tools

PART C

Case study

Before the first E-retailer ever set up shop, Dell Computer turned the personal computer industry on its ear by pioneering the idea of selling custom-built PCs directly to consumers. By developing and then staying focused on what they termed the direct model, Michael Dell built

a \$ 21 billion company that is both known for supply chain excellence and widely considered to have the right business model for the internet age.

Michael Dell attributes his Company's success to an unrelenting focus on the customer. From the start, our entire business – from design to manufacturing to sales- was oriented around listening to the customer, and delivering what the customer wanted has allowed Dell to eliminate all aspects of the business process that do not contribute directly to meeting customer needs.

Dell's success did not come without some growing pains. In the first few years, Dell learned tough but crucial lessons about the importance of parts inventory management and building to what the customers said they needed. And time and again it learned that continued success was tightly tethered to maintaining focus on the direct model.

Forming strong alliances with the suppliers who would make the direct model work was an important task. First Dell chose to source components from expert outside suppliers rather than build them itself. Dell found that this approach gave it the flexibility to rapidly scale operations as customer needs dictated and to gain access to the best components in the world. Further, it believed in supplier partnerships where goals and strategies are shared freely- a dramatic departure from the traditional buy-bid cycle. When this approach to procurement worked so well, Dell was among the first companies to outsource significant portions of its logistics operations to third-party logistics providers.

To avoid the error, cost, confusion, and complexity that come from managing multiple suppliers, Dell partnered with only a few key suppliers and then brought these suppliers close Dell's own business, both geographically and electronically. Dell required suppliers to site their facilities close to Dell's own manufacturing facilities to allow for better communication and service and faster time to market- all critical for a company that does not begin building a computer until it receives an order.

Today, Dell uses the Internet as a key part of its IT strategy: the company is now creating Web-based links for each of its suppliers to facilitate the rapid exchange of information such as component quality metrics, cost structures, and current and future demand forecasts. Providing suppliers with closer electronic links helps Dell continue to push for improved velocity and better quality data and ultimately reduce the total cycle time from when Dell customers place an order to when they receive it.

Questions

- 1) Elaborate how supplier interface contributed to the success of Dell's business model.
- 2) How Dell used information technology to derive business success?