



INDIAN INSTITUTE OF MATERIALS MANAGEMENT
Post Graduate Diploma in Materials Management

June 2015

PAPER No. 16(Old)

Business Strategies and World Class Practices

Date : 18.06.2015

Max. Marks : 100

Time : 2.00 p.m to 5.00 pm

Duration : 3 Hrs.

Instructions:

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

Total marks-32

Total marks-48

Total marks-20

PART A

(32 marks)

(compulsory. Each sub-question carry 1 mark)

Q1. Expand the following

- a. TNC
- b. WIPO
- c. PLC
- d. WIP
- e. AIS
- f. WCC
- g. ABITE
- h. POP

Q2. Match the following

Column A

- a. Delivery performance & Customer service
- b. Financial performance measures
- c. Forward factory
- d. Letter response time
- e. KAIZEN
- f. Poka
- g. Hill
- h. Total cost management

Column B

- a. TCM
- b. PVA
- c. Framework for manufactory strategy
- d. customer
- e. JIT
- f. skinner
- g. mistake
- h. Change for better

Q3. State True(T) or False (F)

- a. Cohen & Apte have compared humans & automated machine
- b. As per Hall manufacturing excellence is value added manufacturing
- c. World Class producers recognize long range capacity decision
- d. Computer Integrated System integrates common Data Base.
- e. Total Quality Control ends with customer
- f. CAPP is a Management Information Tool.
- g. Cause & effect diagram is a technique of SEMED
- h. TQM is concerned about internal customer

Q4. Fill in the blanks

- a. Encourage to expose problem of and not to hide them.
- b. Obtain on time and in correct quantities.
- c. World class manufacturer puts on top
- d. Waste of motion studies economy and
- e. Shiego pioneered the area of quality control
- f. The advantage of AGV is it provides routing
- g. TQM is closely followed by Total Maintenance
- h. TQM promotes "Do it..... time, every time"

PART B

48 marks

(Attempt any 3 . Each question carry 16 marks)

Q 5. Explain Hall's framework of Value-added Engineering

Q6. Write a note on Zoro Defect

Q7. Explain Eight T's of TQM.

Q8. Write a note on Statistical Quality Control.

Q9. How TPM works as a workplace organising tool.

PART C

20 marks

Q. 10. Case study - Compulsory

Located in Everett, Washington, Intermec Printing Systems (IPS) is a manufacturer of bar-code printers, a fast-growing industry with a unit volume growth of 30 percent annually, previously, IPS had a separate production line for each printer model it produced. With the growth the company was experiencing and with more new printer designs on the way, the company was running out of manufacturing space. In addition, frequent rework of printers to accommodate special configurations, excess finished –goods inventory, and slow response to customer demand were resulting from the company's approach to production.

To improve its competitiveness and profitability, and to reestablish itself as a world leader in the bar-code printing business, IPS management decided to adopt the techniques of JIT manufacturing. With the help of consultants, IPS embarked on a transformation to create a short-lead –time, low inventory, high-product quality, quick response production system.

After sending all of its employees to training seminars, IPS collected data and thoroughly analyzed each production process necessary to produce its printers. Instead of using a separate production line for each printer models. The production sequence of its different models, the batch size for each model, and the number of kanban cards needed were then determined. Employees were cross-trained for multiple tasks, allowing employees to “flex” between workstations as demanded by the flow of products and also allowing management to dynamically change the capacity along the production line. Employee's pay rates were based in part on the number of tasks they were trained to perform.

Employees were also trained to perform quality inspectors at each process , limiting the number of defects that were passed down the line. Raw materials storage areas were created at multiple locations near the production line, so that materials needed at each workstations were located very close to that stations. These storage areas are frequently replenished from the main warehouse by materials handlers using a two-bin kanban system.

The result have been dramatic. IPS has experienced a 40 percent reduction in manufacturing space, even after two new models were introduced. Finished- goods inventory has been substantially reduced, with a goal of working toward zero finished – goods inventory with all products produced to order. Rework for special configurations has effectively been eliminated, because custom-ordered printers are initially built as ordered. Raw materials in the warehouse have been reduced, as IPS has worked to standardize the materials used and has worked with its suppliers to improve the quality of materials and have more frequent deliveries of smaller orders. IPS is now dedicated to continuous improvement of its operations.

Questions.

1. What are the reasons that compelled IPS to change its production method?
2. Enumerate the changes carried out by IPS to shift to JIT production.
3. What were the benefits enjoyed by IPS after shifting to JIT system of operation
