



INDIAN INSTITUTE OF MATERIALS MANAGEMENT
Post Graduate Diploma in Materials Management
PAPER No. 16(New)

June 2016

Business Strategies and World Class Practices

Date :16.06.2016

Time : 2.00 p.m to 5.00 pm

Max. Marks :100

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)

Q. 1. Fill in the blank.

- i) M BO emphasis on objectives that are both measurable and set by
- ii) Vendor delivery performance is indicated by
- iii) World class manufacture puts on top.
- iv) Process value analysis is the initial building block of
- v) Juan's Quality Trilogy include quality planning,, and
- vi) Bench marking is the method of improvement business performance by learning from.....
- vii) analysis take stock of current business situation , both in terms of enterprise itself and the business environment it operates.
- viii) Deming's considered two deadly sins and running a company on visible figures only.

Q.2. State True or False

- a. Quick response to customer demands is the dominant dimension of global competition.
- b. Forecasting is crucial for long range survival, growth and profitability of an organization.
- c. EOQ is calculated based upon supplier lead time.
- d. SAP cannot provide real time information to the suppliers to act.
- e. JIT Purchasing is not essential in world class manufacturing.
- f. Value added manufacturing is a philosophy of competitive advantage through the development of people.
- g. Bar codes provide text information encoded , which could only read be electronic readers.
- h. Flexible manufacturing cannot be thought of without SPMs.

Q.3. Expand the following

- a) CIM b) CAPP c) CRM d) ASRS
 e) RFID f) TMS g) LPG h) WTO

Q.4. Match A and B

S.NO	A		B
1	Waste of over production	a.	Prevent defects to eliminate inspection.
2	Waste of waiting	b.	Controlled usage, stop leakages and recycling.
3	Waste of water	c.	Study motion for economy and consistency
4	Waste of transportation	d.	Reduce setup times, and lead times by synchronizing workflows.
5	Waste of processing staff	e.	Reducing set up time , synchronizing quantities and timing between processes, etc.
6	Waste of stocks	f.	Synchronizing work flows much as possible, balancing uneven loads.
7	Waste of making defective parts	g.	Redesigning layouts to make transport handling unnecessary
8	Waste of motion	h.	Need assessment of product and processes.

PART B

48 marks

(Attempt any 3 . Each question carries 16 marks)

- Q.5. a) What are the manufacturing challenges of Information age?
 b) What are the characteristics of world class customers?
- Q.6. a) Discuss Deming's approach and his fourteen points?
 b) Explain Crosby's four absolutes of quality?
- Q.7. a) Explain in detail the use of Barcodes?
 b) What is Kanban ? Give examples.
- Q.8. a) What is natural resource management?
 b) Briefly describe recycling of minerals?
- Q.9. Write short notes on any four
 a) POP system.
 b) M B O

- c) AMBITE system.
- d) Balance Score Card.
- e) CYCLE TIME

PART C

20 marks

Q. 10. Case study - Compulsory

The decision to outsource a strategic component is one of the most wrenching for any company. However it is precisely this willingness to lose a battle in order to win the war that separates Industry Leader from followers. Managers at Cummins were faced with just such a choice in the mid 1980. Confronted with a need to develop much more advanced piston designs to meet emission legislation, They discovered the need to make enormous investment in order to upgrade capabilities .The financial payback appeared dubious since Cummins could buy pistons from several suppliers. On the other hand pistons were the very 'guts' of an engine, and there was an understandable reluctance to relinquish control of the component to a supplier.

An emotional debate raged for over three years. Should Cummins strive to rebuild its piston capability or turn to the best world –wide sources for piston technology? To quell the debate. Senior management commissioned a team with representatives from engineering, manufacturing and purchasing to develop and implement an appropriate piston strategy .Engineers first identified the key technologies and capabilities that would be required to specify, design and manufacture pistons. The team visited the four leading piston suppliers and benchmarked the internal capabilities relative to these suppliers.

The team discovered that Cummins's internal design and manufacturing capabilities lagged behind those of two suppliers who were world class technologists. Moreover, these two companies were aggressive innovators. Their scale allowed them to invest more than 20 times as much as Cummins did in product and process research and development. In fact, both suppliers had their own machine tool divisions and foundries and developed highly specialized machines and metallurgical process. Cumulative volumes that were many time larger than Cummins's allowed them to ride down the experience curve much faster.

Thus not only was Cummins's piston design and manufacturing capability low in relation to the suppliers; but so also its relative rate of learning. In light of this disparity, it was unlikely That Cummins had any chance of matching the capabilities of these suppliers without substantial investments that were difficult to justify. The objective fact –finding mission confirmed that the right decision was for Cummins to outsource pistons.

Questions:

- 1 What held Cummins management to take decision?
- 2 Why new piston could not be developed in-house in Cummins ?
- 3 why the piston was outsourced by Cummins team, narrate the salient points of complete process.
