



# INDIAN INSTITUTE OF MATERIALS MANAGEMENT

June 2013

## Post Graduate Diploma in Materials Management

### Paper 17

#### ADVANCED SUPPLY CHAIN MANAGEMENT

Date: 14.06.2013  
Time: 2.00 p.m. to 5.00 p.m.

Max. Marks 100  
Duration 3 hours

#### Instructions

1. The question paper is in three parts
2. Part A is compulsory. Each sub question carries one mark. **Total marks-32**
3. In Part B answer any 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**

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### PART A

**(1 x32 = 32 marks)**

**Q. 1 State True or False (No need to write statement.) 16 marks**

1. In SCM, the vendor side of flows is called upstream & flows Towards customer are referred to as downstream.
2. Supply Chain is a dynamic system that may vary over time.
3. Effective SCM requires supply chain partners mutually sharing Channel risks as well as rewards, that yield competitive advantage.
4. The locations that performance cycles link together are referred to as nodes.
5. Cycle time is the total elapsed time to move a unit of work from the beginning to the end of a physical process.
6. As per bailment act, transporter carrying goods is called as bailee.
7. Expert systems fall under the umbrella of Artificial Intelligence.
8. All contracts even of small value should be formal.
9. One of the obstacles to process integration along with Supply Chain is silo mentality.
10. In SC, performance measures must be ideally visible.
11. A Supply chain is network of facilities, which includes production facilities& suppliers.
12. Octroi is a tax collected by local authorities i.e. municipal corporation or other similar authorities but not by state government.

13. Mediation is one of the methods, that can be used for quick redressal as per Arbitration Act.
14. Negotiable Instruments include cheque payable either to order or bearer.
15. Time of payment is not the essence of contract but time of delivery of goods is.
16. Caveat Emptor means let supplier be aware.

**Q.2 Match A and B**

**8 marks**

Column A	Column B
a) Boom and bust cycle	1) EOQ model
b) NMTBSCCT	2) Aggregating demand
c) F W Harris	3) Frequency of issue
d) Risk Pooling	4) Delayed differentiation
e) Mass customization	5) Unique products
f) FSN analysis	6) Forrester effect
g) Postponement	7) Tiffin-wallahs
h) Differentiation strategy	8) Modular units

**Q. 3 Expand the following**

**8 marks**

- a. ASEAN
- b. SCIS
- c. SAARC
- d. VMI
- e. UNCTAD
- f. SDR
- g. WTO
- h. RIPS

**PART B**

**(any three 16 x3 = 48 marks)**

**Q. 4**

**16 marks**

- (a) Michael Porter, first articulated Value Chain Concept in 1980. (8)  
Explain each activity with its significance in Value Chain.
- (b) Differentiate between Push & Pull processes. (8)

**Q. 5**

**16 marks**

- (a) What are the common areas & activities in different processes that have potential for cycle time reduction? (6)
- (b) State assumptions & limitations of EOQ formula. (4)
- (c) What are trade- offs while comparing centralized v/s decentralized Distribution system? (4)
- (d) What are the drawbacks of ABC Analysis? (2)

**Q..6 Write Short Notes (Any four)**

**16 marks**

- (a) Cross Docking
- (b) Strategic Alliance
- (c) Types of RSP
- (d) Postponement
- (e) Differentiation Strategy
- (f) RFID

**Q.7**

**16 marks**

- (a) What are the Risks & Advantages in Global Supply Chain? What are the strategies to tackle global risks? (6)
- (b) What are the different dimensions of service quality? Which strategies are linked to competitive strategy---Explain with examples from industry. (6)
- (c) What is Artificial Intelligence? (4)

**Q. 8**

**16 marks**

- (a) What is Blanket Order? How it is used in Purchasing? (3)
- (b) What is stockless purchase? Give two examples from industry. (3)
- (c) While doing TCO analysis, Post-ownership costs are incurred. Which are those? Explain. (6)
- (d) How & when do you plan "follow-up" for expediting orders? (4)

## **PART C**

- Q. 9      Solve the example with appropriate formulae. No marks will be given      20 marks**  
**for direct answers. All steps of solving example will be evaluated.**

ABC Company produces special parts for manufacturing TV The details are:

I	Cost of part	= Re 1/- each
II	Annual requirement	= 250,000 units
III	Normal lead time to produce goods	= 6 weeks
IV	Demand	= 4810/week
V	Std Deviation	= 400/week
VI	Service level	= 95%(k=1.64)
VII	Procurement cost	= Rs 60/order
VIII	Inventory Carrying cost	= 2.5% per month
IX	Maximum lead time	= 10 weeks
X	Probability of lead time extension	= 0.25

**Calculate:**

- a)      EOQ      (4)
- b)      Safety stocks, ROL & Maximum level as per Q method.      (8)
- c)      If supplier insists for 5 orders in a year with 15% discount,      (8)
- Will you avail? Why? Give reasons with illustrations.

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