# INDIAN INSTITUTE OF MATERIALS MANAGEMENT



3. Complete Enumeration

4. Time series method

5. Box-Jenkins

Post Graduate Diploma in Logistics &SCM Post Graduate Diploma in Materials Management - 2 years PAPER No.14 (enrolment code –CPM, CPS) PAPER No. 12 (enrolment code- PMM, PSM, CMM, CSM) [OFFLINE EXAM]

## **Inventory Management**

Date Time	ite : 15.06.2024 ne : 10.00 a.m to 1.00 p.m.					Max. Marks Duration	: 70 : 3 Hrs.	
Instructions: Total : 20 Marks   1. From Part A – answer all questions (compulsory). Each sub questions carries 1 mark. Total : 20 Marks   2. From Part B – Answer any 3 questions out of 5 questions. Each question carries 10 marks. Total : 30 Marks   3. Part C is a case study (compulsory) with questions. Read the case study carefully and answer the questions Total: 20 Marks								
				Pa	rt – A		[20 Marks]	
		(	Attempt all qu	lestions. Each	sub question ca	arries 1 mark.)		
Q. 1 Expand the following abbreviations:							5 Marks	
	1.	EDI	2. COGS	3. LIFO	4. ROI	5. VMI		
Q.2: State whether the statement is TRUE or FALSE							5 Marks	
a) \$	Scra	p is not an ii	nventory.					
b) l	nver	ntory is curre	ent liability of a	n organization.				
c)	c) XYZ analysis classifies inventory based on variation in supplies							
d) I	ИТО	is production	on strategy whe	ere production o	rders are result o	of supply chain of	orders.	
e) I	Rapi	d return of ir	nvestment ROI	is one of the dis	advantages of F	RFID.		
Q. 3: Fill in the blanks					5 Marks			
1. I	f DE	LL compute	rs keeps only 4	l days inventory	in stocks, its inv	entory turnover	istimes per	
a	nnu	m. (Conside	er 360 days per	annum).				
2		is a sel	ective inventor	y control metho	d that classifies i	nventory based	on seasonality.	
3. A	Annu	al requirem	ent is 900 units	, ordering cost i	s Rs.36/-per ord	er & holding cos	st is Rs. 4.5 per unit,	
t	hen	EOQ will be	;					
4. [	Delpl	hi method of	f forecasting is	ame	thod.			
5. (	Actu	al Demand-	Forecast Der	nand)/ Actual D	emand=			
Q. 4 N	latcl	h the follow	ving from Colu	mn A and B		5 Marks		
Column A					Column B			
1. Qualitative Forecast					A. Customer survey of all customers			
2. EOQ					B. How much stocks to order			

C. Seasonal Demand Forecasting

E, Sales force composite.

method

D. Auto regression integrated moving average

#### (Attempt any 3. Each question carries 10 marks)

- Q.5: Explain in details method of Inventory Control by "ABC" analysis; listing differences among these 3 categories- A,B and C. (10 marks)
- Q 6: What is the importance of MRP? What are the objectives and inputs of MRP? (10 marks)
- Q 7: Define EOQ. State the assumptions and limitations of EOQ. Derive the formula, explaining each (10 marks) stage.
- Q 8: Write short notes- (ANY 2) (2x 5= 10 marks)
  - 1. FIFO system 2. Elements of JIT
  - 3. Total Productive Maintenance TPM 4. Factors Influencing FGs inventory
- Q.9: What are the costs associated with inventories? Discuss Ordering and Inventory carrying cost in detail. (10 marks)

#### Q. 10. Case study – Compulsory

Fanta manufacturing company has following details:

Annual Demand to fill bottles----10, 00,000. Set up cost---- Rs. 5000 per batch

Holding cost---- Rs.3 per annum per bottle.

Maximum capacity of filling-2 million.

Current batch size is 100,000 bottles.

#### **Questions:**

- 1. What is the total annual set up cost?
- 2. What is the current annual holding cost?
- 3. What should be the EPQ (Economic Production Quantity) to minimize the total costs?
- 4. What will be the savings, if, EPQ is implemented?

### PART B