

**JUN-2010**

**Indian Institute of Materials Management**  
**Post-Graduate Diploma in Materials Management**  
**Graduate Diploma in Materials Management**

**PAPER-8**  
**Operation Management**

**DATE: 19.6.2010**  
**Time : 10.00am to 1.00pm**

**Max. Marks: 100**  
**Duration : 03 hrs.**

**INSTRUCTIONS :**

1. From Part 'A', answer four questions ( Compulsory). Each sub-question carries 01 mark.  
**Total: 32 Marks**
2. From 'B', answer any 3 out of 5 questions. Each question carries 16 marks.  
**Total Marks: 48**
3. Part 'C', is a case study with sub questions ( Compulsory) **Total Marks: 20**
4. Use of calculator and/or mathematical table is permitted. Graph sheet can be used wherever necessary.
5. Please read the instruction on the answer sheet.

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**PART - A**

**Q1. State true or false**

1. In Forecasting method error analysis is not possible
2. Incentive schemes reduced in cadence of absenteeism and clerical work
3. JIT achieves stockless production
4. Good layout reduces material handling cost
5. Job rotation moves employees from task to another
6. Plant location decisions are short term decision?
7. Kanban process avoid over production
8. Linear regression is useful for short term forecasting of major occurrences

**Q2. Fill in the blanks.**

1. Production planning consist of \_\_\_\_\_ and \_\_\_\_\_
2. SQC used for controlling \_\_\_\_\_ and avoidance of the \_\_\_\_\_  
Of accepting a bad lot
3. Types of maintenance in organizations \_\_\_\_\_ and \_\_\_\_\_
4. MRP systems offer a number of \_\_\_\_\_ potential benefits to  
\_\_\_\_\_ firms.
5. Gantt chart, developed by an American Engineer \_\_\_\_\_ the  
chart is normally drawn on a \_\_\_\_\_ sheet.
6. Stores storage is a the function of \_\_\_\_\_, storing, and  
\_\_\_\_\_ materials.
7. JIT used in business \_\_\_\_\_ process to reduce the \_\_\_\_\_
8. Strategies are formulated at three levels in an organization 1.corporate level 2.  
\_\_\_\_\_ and 3. \_\_\_\_\_.

**Q3.Link & connect the following correctly.**

1	Process planning	It Involves converting aggregate production plans into resources	<b>A</b>
2	CAM	Product quality is more consistent from unit to unit.	<b>B</b>
3	Work measurement	The process of establishing the time that a given task would take when performed by a qualified worker at a defined level of performance.	<b>C</b>
4	Productivity	Manufacture of a single product in huge quantities and stocked in the warehouse awaiting sales.	<b>D</b>
5	PLC	It's refers to the output relative to input	<b>E</b>
6	Resource planning	A simple representative of the cumulative impact of changes in the business environment of the manufactured product.	<b>F</b>
7	JIT	Reduced inventories of raw materials	<b>G</b>
8	Process production	Concerned with planning the conversion (or) transformation processes needed to convert the material into finished product.	<b>H</b>

**Expand following**

(1) FMS, (2) CAM, (3) MPS, (4) MRP-II, (5) SQC, (6) AOQ, (7) LTPD, (8) VMI.

**Part-B**

**Answer any three from following.**

- 1 (a) What are the different elements of operation strategy?  
(b) Explain the characteristics & importance of production operations management?
- 2 (a) Explain the product Life cycle model, with some FMCG product examples?  
(b) Define plant layout and factors including layout?
3. Describe the purchasing cycle for power sector. Provide the suitable ideas (strategic sourcing) to improve the Indian power sector.
- 4 .(a) What is incentive payments; Explain the various types in Incentive plans.  
(b) What is job design, Explain the advantages & disadvantages.
5. Short Notes
  - (a) What is statistical quality control
  - (b) Explain the Just in Time manufacturing method with example.
  - (c) What is ERP and explain five major reasons why companies undertake ERP?
  - (d) Explain the Production Planning Control (PPC) system & Documents used in PPC.

## **CASE STUDY**

Most of the MNCs are operating globally and their supply chains are also truly global. Procurement takes place in one place, manufacturing in some countries, assembly in other countries and marketing in most of the countries. Most companies outsource production to low wage countries like China and India. The network is complex and sometimes very difficult to manage.

Recently there are issues related to environmental pollution created by supply chain activities. If the network is global, it requires more transportation to move goods from place to place. Because of this, there is more damage to environment. As a measure to reduce pollution, companies may go back to local sourcing and manufacturing instead of outsourcing from other countries even though it cost more. As part of green supply chain networks, initiatives are taken in this direction.

- 1. As a supply chain manager, how do you evaluate this situation?**
- 2. Why pollution control is important? provide the list of equipments used to control industrial pollution.**