



# INDIAN INSTITUTE OF MATERIALS MANAGEMENT

Dec 2023

## Post Graduate Diploma in Logistics & SCM Post Graduate Diploma in Materials Management - 2 years

PAPER No. 10(enrolment code- PMM, PSM, CPM, CPS)

PAPER No. 8 (enrolment code –CPM, CPS) [OFFLINE MODE]

### Operations Management

Date: 14.12.2023

Time : 10.00 am to 1.00 pm

Max. Marks : 70

Duration : 3 Hrs.

#### Instructions:

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**

### Part – A

[20 Marks]

(Attempt all questions. Each sub question carries 1 mark.)

#### Q.1 Select the right answer

[5 marks]

- 1.. Capacity lead strategy is a strategy for \_\_\_\_\_ planning
  - a. Inventory
  - b. Process
  - c. Capacity
  - d. All of these
2. Designing a product includes –
  - a. Form design
  - b. Functional design
  - c. Production design
  - d. All of these
3. Capacity requirement planning does NOT include
  - a. Forecasting
  - b. Sequencing
  - c. Determine resources required
  - d. Monitoring
4. Getting more hands to work during harvesting season in the fields is an example of
  - a. installed capacity
  - b. variable capacity
  - c. fixed capacity
  - d. utilized capacity
5. Deming's wheel is also called
  - a. fishbone diagram
  - b. Slice and dice analysis
  - c. PDCA cycle
  - d. Predictive analytics

#### Q.2 Fill in the blanks

[5 marks]

1. \_\_\_\_\_ is a characteristic of services which means that services cannot be seen or touched
2. In \_\_\_\_\_ method, the Voice of customer is converted to Engineering characteristics of a product
3. \_\_\_\_\_ is a state where cost is equal to profit
4. \_\_\_\_\_ strategy is developed by the line managers to carry out the day-to-day activities
5. A product failing to meet specifications at the Pre-despatch inspection stage is an example of cost of \_\_\_\_\_

#### Q.3. Write the full form of the following –

- (i) CAD      (ii) FMEA      (iii) DMAIC      (iv) PERT      (v) MPS

#### Q.4 Match The following

[5 marks]

COLUMN A		COLUMN B	
Sr. No.		Sr. No.	
1	Critical Path Method	A	Services
2	Intangible in nature	B	Process analysis and control
3	Ishikawa diagram	C	High labour intensity
4	Mass Services	D	Expected demand
5	Capacity lead strategy	E	Project scheduling

## PART - B

[Total 30 marks]

(Attempt any 3. Each question carries 10 marks)

- Q5.** (a) What is a Process? Discuss briefly why we need to Plan our process and what principles should we keep in mind [5 marks]  
(b) Explain in detail how a Service Blueprint is made [5marks]
- Q6.** (a) "Explain with diagram any THREE capacity augmentation strategies [5marks]  
(b) Draw the Kano model and explain the various types of customer requirements [5marks]
- Q7.** (a) M/s Capital Power wants to set up a Coal based Power Plant in India. What factors should they consider to select a location for setting up their facility? [5marks]  
(b) Explain the concept of "Design of Experiments" as applied to a manufacturing setup. [5marks]
- Q8.** (a) What does a control chart do? Explain it's usage in Quality control [5marks]  
(b) Explain any two Analytical tools which can be used for sourcing raw materials on an organization [5marks]
- Q9.** Write short notes on any TWO [2 x5 =10 marks]  
a) Design for Environment  
b) Service Process Matrix  
c) Product layout design

## PART -C

[20 marks]

### Q 10 Case Study ( Compulsory)

Good morning !!

A few murmurs around the room indicated to the new MD of Apex Tools Hyderabad that he wasn't really welcome here.

Apex Fittings is a manufacturer of socket tools and extension or handle fittings for those tools. For the socket to fit the handle, the inside diameter of the socket fitting must fit exactly on the outside diameter of the handle fitting. The company was plagued by rejections and returns : In spite of being ISO certified , almost 10% accounted for rework and scrap.

The MD got down to work .. he realized that there is no focus on Quality Assurance and decided that process quality control should first focus on process capabilities

Questions

Q1 Explain in detail, one technique the new MD should use, to identify the cause of defects

Q2 As a part of the Top Management, what are the duties of the MD towards quality?

Q3 Explain the various costs of quality that a company has to bear

Q4 Why do companies get ISO certification ?