



INDIAN INSTITUTE OF MATERIALS MANAGEMENT

Post Graduate Diploma in Logistics & SCM
Post Graduate Diploma in Materials Management - 2 years
PAPER No. 10(enrolment code- PMM, PSM, CMM,CSM)
PAPER No. 8 (enrolment code –CPM, CPS)[OFFLINE EXAM]

June 2024

Operations Management

Date: 13.06.2024

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.)

Q1. Fill in the Blanks

[5 marks]

- i) Under _____ strategy, capacity is increased with a view to coincide with average expected market demand
- ii) _____ Matrix helps to develop new service strategy
- iii) A limiting factor which affects the overall cycle time is called _____
- iv) The process of examining and analysing raw data for the purpose of gaining actionable insights is called _____
- v) DMAIC stands for define, measure, _____, improve control

Q2 Expand the following -

[5 marks]

- (i) QFD
- (ii) CRP
- (iii) PDCA
- (iv) KPI
- (v) ISO

Q3 Match the following

[5 marks]

Column A

- a) Capacity lag strategy
- b) Service shops
- c) Mass service
- d) Measuring Service Quality
- e) Predictive Analysis

Column B

- (i) Advanced Analytical tool
- (ii) high labour intensity, low customization
- (iii) low labour intensity, high customization
- (iv) Moderate strategy
- (v) SERVQUAL

Q 4 Say True or False

[5 marks]

- i) Organisations collect data regarding customer wants and preferences, called the Voice of customer
- ii) Under infinite loading, jobs are loaded onto machines as per the capacities of the work stations
- iii) A service blueprint does not take into account the customer actions
- iv) Data Mining is a knowledge discovery approach
- v) Aggregate production planning matches demand with supply while minimizing costs

PART B

[30 marks]

(Attempt any 3. Each question carries 10 marks)

- Q5 a) Explain in detail any THREE Capacity expansion strategies [5 marks]
- b) Explain any THREE major considerations for capacity Planning [5 marks]
- Q6 a) Explain the Various steps involved in designing of service processes [5 marks]
- b) Explain the “Design of Experiments” concept in manufacturing [5 marks]
- Q7 a) Describe the role of predictive analysis in operations Management [5 marks]
- b) Do you think the leadership of a company has a major role to play in achieving Quality Goals ? Explain your answer [5 marks]
- Q. 8 a) Why is it essential to control service processes ? Explain any 3 ways to control service processes [5 marks]
- b) Why does an organization need to fix standards for services? Explain the process to fix customer defined standards for services [5 marks]
- Q. 9 Write short notes on ANY TWO [2x 5= 10 marks]
- i) Kano Model for customer requirements
 - ii) Service blueprint
 - iii) Difference between cycle time and throughput time

PART –C

(Compulsory)

[20 marks]

Q 10 Case Study

Epic Communications was finalising a long term contract with PushTel Electronics for purchase of 120,000 high speed PCBs . The Head of Procurement Ms B was in PushTel's shop floor on a visit. This is what she observed

The walls of the production facility were decorated with posters such as “Zero Defect”, “Quality is job#1”, “ISO 9000:2001” etc.

A loud spraying noise was suddenly heard - a high pressure hose had come off a machine and fluid was pouring out onto the factory floor. The operator however quickly reattached the hose and proceeded to clean the floor – as if it was business as usual.

Employees who were producing the parts appeared to be doing testing and inspection as well. Parts had been pulled from the line to be reworked or scrapped and kept in the side. As she watched, an employee almost dropped a PCB, but luckily caught it by crushing it with his elbow against a conveyor belt casing, and quietly kept it back in the rework pile.

Mrs B asked to see the scrap records – the latest one was 3 weeks old and mostly had the reason “operator error”. There was no way the company could possibly trace the causes and improve processes, using these scrap records.

PushTel's CEO said, “we maintain high inspection levels, almost 100%, to assure you that you will get the highest quality possible”.

Epic communications is in a fix. To give or not to give the contract?

Questions:

- Q1. What are the various costs of quality? Explain
- Q2. How would an Ishikawa diagram help PushTel?
- Q3. What should be the role of the Leadership of PushTel, moving forward?
- Q4. If you were Mrs B, what would you do, and why?