



INDIAN INSTITUTE OF MATERIALS MANAGEMENT

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

PAPER No. 8 (enrolment code –CPM, CPS)

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

Operations Management

Date: 15.06.2023

Time : 10.00 am to 1.00 pm

Max. Marks : 70

Duration : 3 Hrs.

June 2023

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

[Total : 20 Marks]

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

Q.1 Select the right answer

[5 marks]

1. Strategies designed to handle the day-to-day operations of an organization is _____ strategy
(a) Short term (b) Function level (c) Activity based (d) Situation based
2. _____ manufacturing systems are essential for customizing processes as required
(a) Lean (b) Service (c) Flexible (d) None of these
3. _____ refers to the differentiation of quality of services between service providers
(a) Ranking (b) Non-Conformance (c) Heterogeneity (d) All of these
4. One of the methods used for process analysis is the _____
(a) Deming's cycle (b) Inspection (c) Interview method (d) Questionnaire method
5. Capacity lead strategy is a strategy for _____ planning
(a) Inventory (b) Process (c) Capacity (d) All of these

Q.2 Fill in the blanks

[5 marks]

1. _____ is a strategy that is formulated by the heads of SBU's
2. Products have a limited life and pass through stages. This is called as _____
3. _____ is a computer-based program for inventory management
4. Program evaluation and review technique is a technique used for _____
5. _____ is a methodical approach to problem solving and decision making

Q.3 Mention True or False

[5 marks]

1. Theory of Constraints (TOC) is a method used to determine the manufacturing process
2. Linear programming is a mathematical method used to solve optimization problems
3. Line balancing is used in case of batch processing facility layout
4. Cost of quality has three components namely the cost of Prevention, Inspection and Failure
5. One of the objectives of operations management is to achieve efficiency and effectiveness

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	Product facility layout
5	Line loading	E	Project scheduling

PART - B

[Total 30 marks]

Answer any THREE out of the following five questions:

- Q5.** (a) What are the ways in which operations research can help to be competitive? [5 marks]
(b) What are the steps that have to be followed for better project management? [5 marks]
- Q6.** (a) What is the framework that can be applied to a generic problem of problem solving [5 marks]
(b) Draw the Kano model and explain. Explain and identify the 5 types of customer requirements [5 marks]
- Q7.** (a) Explain the 4 different methods of capacity expansion strategies [5 marks]
(b) Explain with a diagram the process of machine scheduling. Explain the classification [5 marks]
- Q8.** (a) Explain with a diagram the service process matrix. Give examples for each [5 marks]
(b) What is the process followed for the design of products. Explain each step in the process [5 marks]
- Q9.** (a) What are some of the important concepts followed in operations research explain briefly [5 marks]
(b) What are factors needed to review capacity and what is the advantage of capacity planning? [5 marks]

PART - C

[Total: 20 Marks]

Q.10

CASE STUDY (Compulsory)

A group of 6 village headmen joined together for improving the lives of their youngsters. These 6 villages did not have a pre-university college. Students were dropping out of studies due to the distance they have to travel in order to continue their studies. The nearest college did not have the resources to take in the students from these 6 villages. The headmen of these villages wanted to set up a college for the benefit of the students of the 6 villages. They hired the services of an expert in operations management in order to arrive at all decisions systematically and scientifically.

The expert insisted that they define the intent (long term) or objectives. Based on these long-term objective's strategies were formulated. The strategies helped them to arrive at the organizational strategies.

The next stage in the process was to identify the capacity of the school to fulfill the needs of the 6 villages. Some additional capacity has to be planned for the college growing population of the villages.

Locating the college was a challenging task. Various factors need to be taken into account giving importance for each of the factors. Integration of these factors to arrive at the best possible location is important.

Having arrived at all the above information in a scientific and systematic manner the final stage was to draw up a proper step by step time frame for completing the school project. This method not only identifies the various stages but also identifies likely problem area with respect to project completion.

Questions:

1. What is the need to define the strategic intent of the organization? What are the steps in strategy formulation? What are the strategies formulated for the running of the organization? [5 marks]
2. Capacity can be calculated in many ways depending upon the need. Explain the various types of capacity that can be identified [5 marks]
3. Explain some of the methods used to integrate the factors and arrive at an optimum location for the school [5 marks]
4. Identify the two popular project scheduling methods and the advantages in carrying out project scheduling [5 marks]