INDIAN INSTITUTE OF MATERIALS MANAGEMENT

Dec 2022

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 : 15.12.2022   **Max. Marks** : 70
Time : 10.00 a.m to 1.00 p.m.   **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

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Part – A   [20 Marks]
(Attempt all questions. Each sub question carries 1 mark.)

Q1 Fill in the blanks –   **[5 marks]**

a)The layout in which Machines performing similar operations are grouped together is called
_____ Layout

b) The process of arranging manufacturing activities according to their starting and completion times
is called _____

c) Time lapsed between two successive outputs is called _____ time

d) Mass Services have a _____ level of labour intensity but a _____ level of cooperation and   customization

e) _____ is not a strategy for capacity addition

Q2 Match the following –   **[4 marks]**

	Column A		Column B
1.	Bottleneck		Day to day activities
2.	Operations Research		The first task must be completed before starting the second task
3.	Precedence		slows down a process
4.	Functional strategy		Problem solving using analytical tools

Q3 Write the full form of –   **[5 marks]**
   a. CRM   b.QMS   c. DoE   d.PERT   e. KPI

Q4 Select the right option –   **[6 marks]**

a) Green sourcing does NOT include the following –
  i) Digital communication   ii)Using green colour paint over the materials
  iii) Recycled materials   iv) Renewable energy sources

b) The 3rd stage in a product life cycle is
  i) Growth   ii) Decline   iii) Maturity   iv)Sine wave

c) Which of the following features of services means that services cannot be stored
  i) Heterogeneity   ii) Intangibility   iii) Compatibility   iv) Perishability

d) Service processes can be controlled using this method –
  i) testing   ii) audit   iii) Review   iv) All of these

e) Corporate strategy decides in what markets the business will operate
  i)True   ii)False

f) Green sourcing does NOT include the following
  i) digital communication   ii) using green colour paint over the materials
  iii) recycled materials   iv) renewable energy sources

PART B [30 marks]

(Attempt any 3. Each question carries 10 marks)

Q5 a) Compare and contrast Process layout with Product Layout ? **[5 marks]**
   b) For assembling a car, which layout would you choose and why? **[5 marks]**

Q6 a) Define Quality. Explain the various costs of Quality   **[5 marks]**
   b) Explain the Ishikawa diagram   **[5 marks]**

Q7 a) Explain how Breakeven Analysis method is used for Facility location planning **[5 marks]**

   b) Harry Potter Magic Kingdom, a chain of theme parks, is evaluating two prospective locations
       for it's expansion – Chennai India and Shanghai China. The table below shows the relevant
       factors and their rating, used by the company to determine the most suitable location for it's
       next theme park. **[5 marks]**

Factor	Factor rating (1-5)	Rating for Chennai (1-10)	Rating for Shanghai (1-10)
Tax incentives	4	7	5
Proximity to customers	3	6	5
Per capita income	5	3	4
Utilities availability	3	5	8

   Suggest the best location for the next theme park

Q8 a) Explain the Service Process Matrix with examples   **[5 marks]**

   b) Explain the stages of a Project life cycle **[5 marks]**

Q 9   Write short notes on any TWO–(**2x 5 = 10 marks)**
   a.   Johnson's algorithm   b.Dynamic programming
   c., Differentiate between cycle time and throughput time   d. Service blueprint

PART –C   [20 marks]

Q. 10. Case study – Compulsory
Suntech Power Holdings of China (later called Wuxi Suntech Power Co ltd, PR China) was the world's largest
producer of photovoltaic cells for converting light energy into electricity. In anticipation of America and Europe's
continued drive for alternate energy sources, Suntech aggressively expanded Plant construction and capacity
development to take advantage of the expected steady growth in the solar power industry.
But the anticipated big increase in demand did not occur. The company was stuck with idle capacity and excess
inventory. Suntech was forced to declare bankruptcy in 2015 because it's anticipated higher demand for photovoltaic
cells never materialized. Because of cheaper oil prices and US Government's decision to protect home grown
companies to putting tariffs on Suntech's exports, the company found that it's too rapid expansion had made it
impossible to remain profitable

Q1 Write a line on any 4 types of capacity
Q2 What are the general steps followed in capacity augmentation ?
Q3 What is the difference between incremental and One step expansion
Q4. What could Suntech have done to remain profitable?

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