MODEL QUESTION PAPER

PAPER – 9

TERM – JUNE 2025

SYLLABUS 2022

SET 2

Full Marks: 100

 $[15 \times 2 = 30]$



OPERATIONS MANAGEMENT AND STRATEGIC MANAGEMENT

Time Allowed: 3 Hours

The figures in the margin on the right side indicate full marks.

SECTION – A (Compulsory)

1. Choose the correct option:

- i. Efficiency of an operation facility is measured by:
 - a) (Effective Capacity) / (Design Capacity) × 100
 - b) (Actual Output) / (Design Capacity) × 100
 - c) (Actual output) / (Effective Capacity) × 100
 - d) (Design Capacity) / (Effective Capacity) × 100
- ii. The desired objective of Production and Operations Management is:
 - a) Optimal utilisation of available resources
 - b) Use cheap machinery to produce
 - c) To train unskilled workers to manufacture goods perfectly
 - d) To earn good profits.
- iii. One of the important basic objectives of Inventory management is:
 - a) To calculate EOQ for all materials in the organisation
 - b) To go in person to the market and purchase the materials
 - c) To employ the available capital efficiently so as to yield maximum results
 - d) Once materials are issued to the departments, personally check how they are used
- iv. Cost reduction can be achieved through:
 - a) Work sampling
 - b) Value analysis
 - c) Quality assurance
 - d) Supply chain management.
- v. In a linear programming model feasible solution is:
 - a) The basic solution to the general L.P problem
 - b) Any solution that also satisfies the non-negative restrictions of the general L.P problem
 - c) A solution which optimize (maximize or minimize) the objective function of a general L.P problem
 - d) A basic solution to the system of equations if one or more of the basic variables become equal to zero
- vi. Gantt Chart is a principal tool used in :
 - a) Scheduling
 - b) Loading
 - c) Planning
 - d) Routing

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- vii. Preventive maintenance is useful in reducing:
 - a) Inspection Cost
 - b) Shutdown Cost
 - c) Cost of pre- mature replacement
 - d) Set-up cost of machine

viii. When work centers are used in optimal sequence to do the jobs, we can:

- a) Minimise the set up time
- b) Minimise the break down of machines
- c) Minimise the utility of facility.
- d) None of the above

ix. The tool used in TQM to identify root causes of problems is:

- a) Bar chart
- b) Gantt chart
- c) Fishbone diagram
- d) Flowchart

x. The _____ of a company state how managers and employees should conduct themselves.

- a) values
- b) goals
- c) objectives
- d) vison

xi. This _____ provides the broad 'data' from which to identify key drivers of change.

- a) SWOT analysis
- b) BCG matrix
- c) PESTEL analysis
- d) Critical Success Factors

xii. A ______ is a business unit in a growing market, but not yet with high market share.

- a) cash cow
- b) dog
- c) question mark
- d) star

xiii.

is similar to referral programs

- a) Influencer Marketing
- b) Affiliate marketing
- c) Social Media Marketing Platforms
- d) Content marketing

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- xiv. Which among the following is not a component of a block chain?
 - a) Distributed ledger technology
 - b) Immutable record
 - c) Smart contracts
 - d) Increased threat

xv. Business Process Reengineering (BPR) primarily aims to:

- a) Increase the number of employees
- b) Improve existing processes incrementally
- c) Reduce the number of business processes
- d) Radically redesign business processes to achieve significant improvements

SECTION – B

(Answer any 5 questions out of 7 questions given. Each question carries 14 marks.)

		[5 x 14 = 70]
2.	(a) State the characteristics of modern operation functions.	[7]
	(b) Briefly explain the different stages of the product life cycle.	[7]

- **3.** (a) Discuss the objectives of production planning and control.
 - (b) With the help of following data identify the trend of sales for the next five years:

Years	2019	2020	2021	2022	2023	2024
Sales (in lakhs)	100	110	115	120	135	140

4. (a) Four jobs can be processed on four different machines, with one job on one machine. Resulting profits vary with assignments. They are given below:

Machines									
A B C D									
	Ι	42	35	28	21				
loba	Π	30	25	20	15				
1008	III	30	25	20	15				
	IV	24	20	16	12				

Calculate the optimum assignment of jobs to machines and the corresponding profit.

(b) The processing times (tj) in hrs for the five jobs of a single machine scheduling is given. Find the optimal sequence which will minimise the mean flow time and find the mean flow time.

Prepare a sequence which will minimise the weighted mean flow time and also find the mean flow time



[7]

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[7]

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Job (j)	1	2	3	4	5
Processing time (tj) hrs	30	8	10	28	16
Weight (Wj)	1	2	1	2	3

5. (a) A Public transport system is experiencing the following number of breakdowns for months over the past 2 years in their new fleet of vehicles:

Number of breakdowns	0	1	2	3	4
Number of months this occurred	2	8	10	3	1

Each break down costs the firm an average of $\gtrless2,800$. For a cost of $\gtrless1,500$ per month, preventive maintenance can be carried out to limit the breakdowns to an average of one per month. Calculate the breakdown cost and preventive maintenance cost per month, and advise the company on which policy is more suitable. [7]

(b) The following table gives data on normal time & cost and crash time & cost for a project.

A	Norma	al	Crash		
Activity	Time (days)	Cost (₹)	Time (days)	Cost (₹)	
1—2	6	600	4	1,000	
1—3	4	600	2	2,000	
2—4	5	500	3	1,500	
2—5	3	450	1	650	
3—4	6	900	4	2,000	
4—6	8	800	4	3,000	
5—6	4	400	2	1,000	
6—7	3	450	2	800	

The indirect cost per day is ₹100.

(i) Prepare the network and identify the critical path.

(ii) Calculate the normal project duration and associated cost.

(iii) Crash the relevant activities systematically and determine the optimum project completion time and cost.

6. (a) Identify some issues that need to be kept in mind while setting objectives. [7]

(b) Describe the meaning of cloud computing and summarize its advantages and disadvantages. [7]

- 7. (a) Analyse the BCG matrix. Also discuss its advantages and disadvantages.
 - (b) Discuss Porter's value chain of an organization.
- 8. (a) Examine various approaches to strategic control.
 - (b) Discuss the types of strategic controls.



SET 2

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