

Cutting, Overwriting, Erasing, Fluid painting and use of Lead Pencil will earn no marks.
 Write answer of the Question No.1 and 2 on this sheet and handover it to the supervisory
 staff of examination within first 35 minutes.

Time Allowed: 35 Minutes

(OBJECTIVE PART)

Max. Marks: 32

Sign of
 Supdt. _____

1- a) Encircle the correct answer:

1x8

- i) Four workers installed 800 square yards of carpeting in eight hours. The productivity is:
 a) 15 yards/hour b) 20 yards/hour c) 25 yards/hour d) 30 yards/hour
- ii) High variety, Customized output with one or few skilled workers responsible for an entire unit are the attributes of:
 a) Mass Production b) Craft Production c) Lean Production d) Soft Production
- iii) Dismantling and inspecting a competitor's product to discover product improvements is:
 a) Reverse Engineering b) Manufacturability
 c) Product Liability d) Standardization
- iv) Assad & Co. uses a weighted moving average to forecast its product sales. It assigns a weight of 5 to the previous month's demand, 3 to demand two month ago, and 2 to demand three months ago. If sales amounted to 1000 units in January, 2000 in February and 3000 in March. What should be the sales forecast for April?
 a) 2400 b) 2300 c) 2067 d) 1922
- v) The product life cycle Comprises of:
 a) 5 Phases b) 4 Phases c) 3 Phases d) 2 Phases
- vi) Bringing engineering design and manufacturing personnel together early in design phase is:
 a) Remanufacturing b) Concurrent Engineering c) Manufacturing Design d) Design for Assembly
- vii) Two lamps are installed to light a room. When turned on, one has a probability of working of 0.90 and the other has a probability of working 0.80. Only single lamp is sufficient to enlighten the room, the reliability of the system is:
 a) 96% b) 97% c) 98% d) 100%
- viii) The Academic Computing Centre has five trainers available in its computer lab to provide training sessions to students. Assume that the capacity of the system is 2000 students per semester and the utilization is 95%. If the number of students who actually got their orientation session is 1900. What is the efficiency of the system?
 a) 70% b) 75% c) 94.73% d) 100%

b) Encircle True or False.

1x4

- i) How processes or systems are managed to Produce goods or deliver services are the subject of operation management. **True \ False**
- ii) System design concerns with the decisions of capacity, location and arrangement of departments, product and service planning and acquisition and placement of equipment. **True \ False**
- iii) System in which lower-skilled workers use Specialized Machinery to produce high volume of Standardized goods refers as lean production. **True \ False**
- iv) Actual Output as a percent of Design Capacity is called Efficiency. **True \ False**

b) Fill in the blank meaningfully.

1x4

- i) _____ is the ability to adapt quickly to changes in volume of demand, in the mix of product demanded and in product design, has become a major competitive strategy.
- ii) _____ is a measure of effective use of resources, usually expressed as the ratio of output to input.
- iii) _____ means involving employees in every step of the production process.
- iv) _____ design is form of standardization in which components are subdivided into modules that are easily replaced or interchanged.

(Continued Overleaf)

2- Give short answers to the following questions:

2x8

i) Define the term REMANUFACTURING.

ii) Describe in few word the term STANDARDIZATION.

iii) Compare this year productivity with last year and decide about it using following information:

Item of Consideration	Last Year’s Data	This Year’s Data
Output in Units	11,000	12,000
Labor Hours	12,000	13,200
Utilities in \$	7,600	8,250
Capital in \$	83,000	88,000

iv) What is FORECASTING?

v) What WORK SAMPLING?

vi) Note down any Four Dimensions of Quality.

vii) Distinguish between Utilization and Efficiency.

viii) View on A-B-C approach of inventory.



Attempt **FOUR** Questions in all. All Questions carry equal marks.

SUBJECTIVE PART

- 3- a) Point wise express your views why a Manager needs to study Operation Management?
- b) What is Difference between PRODUCTION of GOODS and SERVICE OPERATION?
- c) Do historical Evolution of Operation Management.
- 05
- 05
- 07

- 4- a) Explain the Factors that affect PRODUCTIVITY.
- b) Why organizations fail or perform poorly?
- c) Jim’s department at a local department store has tracked the sales of a product over the last ten weeks. Forecast demand using exponential smoothing with alpha of 0.4, and an initial forecast of 28. Calculate MAD and the tracking signal. What do you recommend?
- 05
- 05
- 07

Period	1	2	3	4	5	6	7	8	9	10
Demand	24	23	26	36	26	30	32	26	25	28

- 5- a) Narrate Different Phases of the DECISION PROCESS.
- b) Explain different DECISION ENVIRONMENTS.
- c) Refer to following pay off matrix:
- 05
- 05
- 07

Alternative location available to build new warehouse	Future’s Possibility	
	New Bridge Built	No New Bridge
A	1	14
B	2	10
C	4	6

Assume the pay offs represent profits in million rupees. Suggest the alternative that would be chosen under each of these decision criteria:

- i) Maximin
- ii) Maximax
- iii) Laplace

- 6- a) Explain DELPHI METHOD of Forecasting.
- b) Differentiate Order Qualifiers from Order Winners.
- c) What are the distinctive competencies and how do they relate to strategy formulation?
- 05
- 05
- 07

- 7- a) List some of the main reasons; organizations need to make location decisions.
- b) Explain what aggregate planning is and how it is useful.
- c) GMT Bakers has a plant for processing breakfast rolls. Last week the facility produced 148,000 rolls. The effective capacity is 175,000 rolls. The production line operates 7 days per week with three 8-hours shifts per day. The line was designed to process breakfast roll at the rate of 1200 per hour. Determine the Design Capacity, Utilization and Efficiency of this plant when producing the said roll.
- 05
- 05
- 07

- 8- a) What are the some of the factors that cause organizations to redesign their products or services?
- b) What is Clustering? Provide two real examples of clustering one belonging to manufacturing and the other from service sector.
- c) Consolidated Refineries, headquarter in Houston, has to decide among three sites for construction of new oil-processing center. The firm has selected six factors listed below as basis for evaluation and has assigned rating weights from 1 to 5 on each factor.
- 05
- 05
- 07

Factor	Factor Name	Rating Weight
1	Proximity to port facilities	5
2	Power-source availability and cost	3
3	Workforce attitude and cost	4
4	Distance from Houston	2
5	Community Desirability	2
6	Equipment Supplies in area	3

Management has rated three locations for each factor 1 to 100 points basis.

Factor	Location-A	Location-B	Location-C
1	100	80	80
2	80	70	100
3	30	60	70
4	10	80	60
5	90	60	80
6	50	60	90

If you have to decide the site for new oil processing center, decide the site with appropriate calculation using given information collected by the Company’s management.