

Roll No.

Total No. of Pages : 03

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MBA / MBA(IB) (Sem-2)

**PRODUCTION AND OPERATIONS MANAGEMENT**

Subject Code : MBA-205-18

M.Code : 76157

Date of Examination : 20-06-2023

Time : 3 Hrs.

Max. Marks : 60

**INSTRUCTIONS TO CANDIDATES :**

1. SECTION-A contains EIGHT questions carrying TWO marks each and students has to attempt ALL questions.
2. SECTION-B consists of FOUR Subsections : Units-I, II, III & IV. Each Subsection contains TWO questions each carrying EIGHT marks each and student has to attempt any ONE question from each Subsection.
3. SECTION-C is COMPULSORY and consist of ONE Case Study carrying TWELVE marks.

**SECTION-A**

**I. Write brief notes on the following:**

- a) Define Product Design & Development.
- b) Discuss the concept of facility location.
- c) What do you understand by method study and work measurement?
- d) Explain the benefits of Six Sigma.
- e) What is Juran's Quality Trilogy?
- f) Elaborate the importance of value analysis in Production Management.
- g) Explain the concept of job and batch production.
- h) What do you understand by the term Economic Order Quantity?

## SECTION-B

### UNIT-I

2. Explain the transformation process model of operations management. Discuss the various types of production systems. Give examples.
3. Discuss the need and importance of new product design and development. Explain the steps involved in new product design & development, with examples.

### UNIT-II

4. Discuss the concept and importance of Method Study and Work Measurement. What are the functions of Production Planning and Control?
5. What are the various types of plant layouts? Also discuss the problems faced while deciding on a facility layout.

### UNIT-III

6. Discuss the various types of Sampling Techniques. What are the applications of control charts? Explain with illustrations.
7. What is the importance of Total Quality Management. Discuss Deming's 14 principles and Juran's Quality Trilogy.

### UNIT-IV

8. Explain Value analysis in operations management. Discuss virtual factory concept.
9. Derive an expression for Economic Order Quantity, stating suitable assumptions. Also find the expression for total optimised costs.

## SECTION-C

10. Study the following case and answer the questions that follow :

XYZ Ltd does the ABC classification of the various components and parts it uses for assembling its tractors.

- a) As an operations manager, you are required to classify the following parts and components into A, B and C categories according to their usage values.

- b) Draw the ABC distribution curve.
- c) Item # 8 has a high criticality class i.e. a shortage of this item may lead to a complete halt in the production process. What special treatment can be given to this item?

Item ID #	Unit Price (Rs)	Annual usage (Units)
1	4	90,000
2	30	2,500
3	74	380
4	63	13,400
5	700	180
6	2,200	640
7	400	70
8	3	350
9	88	5,900
10	2	200,000

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