

AT-1409

**M.B.A. Semester—II Examination**  
**PRODUCTION AND OPERATIONS MANAGEMENT**  
**Paper—MBA/206**

Time : Three Hours]

[Maximum Marks : 70

- Note :—** (1) Attempt **ALL** questions.  
(2) Figures to the right indicate marks.  
(3) Use of scientific calculator is permitted.

**SECTION—A**

1. (A) Which factors influence the layout of a plant ? In what way each factor influences the plant layout ? 14

**OR**

- (B) What are the functions of production and operations management ? How does marketing function influence the production function ? 14

**SECTION—B**

2. (A) Discuss the objectives of Total Quality Management. 7  
(B) An educational institute wishes to be an ISO 9000 institute. Develop a suitable internal audit system for the same. 7

**OR**

- (C) What do you understand by capacity planning ? 7  
(D) 15 samples of 20 pieces are drawn for inspection in one of the shifts. The number of defective items found in 15 samples are given below. Find out probability of defective samples.

Sample No.	Number of Defective items
1	2
2	5
3	6

Sample No.	Number of Defective items
4	7
5	3
6	2
7	3
8	0
9	5
10	6
11	6
12	2
13	3
14	1
15	3

3. (A) How is inventory controlled by using ABC analysis ? 7
- (B) A typical store of an industrial unit wishes to design guidelines for security and safety. Design the guidelines for the store emphasising on security and safety aspects for material stored in store. 7

OR

- (C) Why is it necessary to inspect the materials when received in the stores ? 7
- (D) The table shows annual usage and per unit cost of material. Categorise the items in A, B, and C categories using ABC analysis of inventory management and comment.

Item No.	1	2	3	4	5	6	7	8	9	10
Average Usage (Units)	20	60	20	30	5	50	160	20	15	20
Unit Cost (Rs.)	2	15	10	15	20	130	8	2	3	2

**SECTION—C**

4. (A) Explain the following with respect to production function :  
(i) Sequencing  
(ii) Dispatching. 7
- (B) Give the typical organisational structure for production management. Also briefly explain responsibilities of each functional head in the organisation structure. 7

**OR**

- (C) Distinguish between Batch production and Job production. 7
- (D) Explain the salient features, characteristics and when to use the “Make to Order” production system. 7

**SECTION—D**

5. The following data refers to time study, conducted on a job consisting of four elements. All readings are given in minutes. Using cumulative timing method along with rating factors, calculate standard time required to complete the job. Also calculate yearly production considering 300 working days, and workforce of 20 workmen.

Element	Stop	Watch	Reading		Rating
	Cycle 1	Cycle 2	Cycle 3	Cycle 4	
P	20	116	203	304	120
Q	45	132	230	329	110
R	85	171	271	371	80
S	95	183	282	383	120

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