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# BT-7/M-20 37057 STATISTICAL QUALITY CONTROL AND RELIABILITY ME-405E

Time : Three Hours] [Maximum Marks : 100

**Note** : Attempt *Five* questions in all, selecting at least *one* question from each Unit.

## Unit I

# 1. Write briefly on the following :

Roll No.

(a) Taguchi's concept of quality 10	(a)	Taguchi's	concept	of quality	10
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- (b) Economics of quality. 10
- Briefly discuss the concept of TQM and describe its implementation with respect to role of customers, management and employees.
  20

## Unit II

3.	Write	e briefly on the following :	
	(a)	Trial control limits	7
	(b)	Reject and revoke	7
	(c)	pi chart.	6

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4. What is sensitivity of a chart ? Draw a suitable control chart for the given data : 20

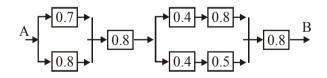
Item No.	1	2	3	4	5	6	7	8
No. of Defects	9	3	6	5	8	10	3	7

### Unit III

- Describe the importance of sampling plans. How are these sampling plans selected ?
  20
- Describe, how are sampling plans designed ? With an OC curve, describe consumer risk and producer risk. 20

### Unit IV

- 7. Write briefly on :
  - (a) Factors affecting reliability 10
  - (b) Reliability optimization. 10
- 8. Discuss the ways to evaluate reliability. Calculate the reliability of the system shown below : 20



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