



Reg. No. :

Name :

**Eighth Semester B.Tech. Degree Examination, April 2016
(2008 Scheme)**

08.806.3 : INDUSTRIAL QUALITY CONTROL (MPU)

Time : 3 Hours

Max. Marks : 100

PART – A

Answer **all** questions.

1. Explain about quality cost.
2. List out attribute control charts and explain their uses.
3. What is demerit charts ? Explain with an example.
4. Distinguish between sub grouping and sampling.
5. Discuss about multiple sampling plans.
6. Discuss about AOQL.
7. What is acceptance sampling ? Explain its advantages.
8. Discuss about availability.
9. Explain product design with an example.
10. What is MTBF ? How it can be reduced ?

(10×4=40 Marks)

PART – B

Module – I

11. a) Explain the different types of attribute control charts with their control limits.
b) What is sigma chart ? Explain with its advantages.

OR

P.T.O.



12. a) Explain the contexts where defective charts are used.
 b) Using the given data construct a p chart and infer

Sample No.	1	2	3	4	5	6	7
Sample size	670	689	987	678	989	809	899
No. of defectives	114	110	102	100	117	110	101

Module – II

13. a) Explain in detail about OC curves and its uses.
 b) Discuss in detail about consumers risk correlated with errors.

OR

14. a) Estimate probability of acceptance at 1.5% defective using OC curve for the given sampling plan.

$$N = 5000, n_1 = 500, C_1 = 5, n_2 = 300, C_2 = 6.$$

- b) Explain in detail about rational subgrouping.

Module – III

15. a) What is meant by redundancy? How it improve reliability?
 b) Discuss about hazard rate and bath tub curve.

OR

16. a) Discuss how maintainability and availability can be increased.
 b) Compute the system reliability of a system consists of two subsystems S1 and S2 connected in series. The subsystem S1 consists of three components having reliabilities 0.55, 0.66 and 0.77 connected in parallel. The subsystem S2 consists same three components having same reliabilities connected in series.

(3×20=60 Marks)