B.Sc. DEGREE EXAMINATION, APRIL 2018.

III YEAR VI SEMESTER

Core Major - Paper XIV - STATISTICAL QUALITY CONTROL AND RELIABILITY

Time : 3 Hours Max. Marks : 60

SECTION A – (10 × 1 = 10 marks)

(Q. No. 1-12)Answer any *TEN* questions

1. Define SQC
2. What do you mean by tolerance limit?
3. Mention the control chart for attributes
4. Define 3 sigma control limits
5. Define LTPD
6. Define Acceptance Sampling plan
7. Define Sequential sampling
8. What do you mean by variable sampling plan.
9. Define Reliability
10. Define hazard rate.
11. Define Rectifying sampling plan
12. Write down the concept of six sigma.

 SECTION B – (5 × 4 = 20 marks)

(Q. No. 13-19)Answer any *FIVE* questions

1. Explain the parts of Shewarts control chart.
2. Write down the control limits of $\overbar{x}$ and R chart.
3. What is meant by consumer’s risk and producer’s risk?
4. Determine n and k for one sided specification OC curve.
5. Explain Bath tub curve.
6. Explain the application of theory of runs
7. Explain the terms AQL, AOQ , ATI and ASN.

 SECTION C – (3 × 10 = 30 marks)

(Q. No. 20-24)Answer any *THREE* questions

20. Explain the need for SQC techniques in industry.

21. Explain the control chart for 1. fraction , 2. non – conforming.

22. Describe the double sampling plan in detail

23. Explain SPRT and derive its OC and ASN function.

24. Explain the parallel and standby system of the reliability .