PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS')

MSc DEGREE EXAMINATION JUNE 2018
(fourth Semester)

Branch - STATISTICS

STATISTICAL QUALITY CONTROL

rime: Three Hours   Maximum: 75 Marks
Answer ALL questions
ALL questions carry EQUAL marks   (5 x 15   75)

1 a Give a short note on essential of TQM in industries.

   b Describe the elements of ISO models.
                              OR
   c Describe briefly about TQC.

   d Explain the concept of six sigma.

2 a Explain the need, construction and uses of X and R charts in
       controlling the quality of a product.

    b Describe the two-sided decision procedure in CUSUM control charts.
                              OR
   c Explain the concepts of the V-mask in the Shcwhart chart for.
       monitoring a production process and give its advantages.

   d Explain the basic principles and design of CUSUM chart.

3 a Give a detailed account on the importance and applications of
       acceptance sampling in the product control.

   b Obtain the expressions for operating characteristic, ASN and A l l
       curves for single sampling plan.
                              OR
   c Describe the modifications of CSP-1 as suggested by Dodge and Torrcy.

   d Explain AOQL and LTPD.

4 a Derive the parameters of double sampling plan.

   b Derive the sampling plan to estimate process parameter with double
       specification limits when o is known.
                              OR
   c Explain the concepts of OC and AOQ curve when a sequential plan is subject
       to screening.

   d Derive the concept of MIE-STD 414 tables.,

5 a Give a detailed note on hazard rate.

   b Describe the concept of censored samples.
                              OR
   c Derive the UMVIJ of reliability under complete sample with single parameter.

   d Explain the concept of serial and parallel system in the reliability
       theory.

                     Z–Z–Z   **END**