PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BCom DEGREE EXAMINATION MAY 2019
(Fourth Semester)

Branch **- COMMERCE (BUSINESS ANALYTICS)**

STATISTICAL QUALITY CONTROL

Time : Three Hours Maximum : 75 Marks

SECTION-A (20 Marks!
Answer **ALL** questions
ALL questions carry **EQUAL** marks (10 x 2 = 20)

1 Define SQC.
2 What is chance causes?
3 What are the various types of control charts?
4 Define producer's risk?
5 Define TQM.
6 State the need for quality improvement.
7 Define process capability index.
8 Define statistical process control
9 What do you meant by IFR and DFR?
10 Define cumulative hazard rate.

SECTION - B (25 Marks)
Answer **ALL** Questions
ALL Questions Carry **EQUAL** Marks (5 x 5 = 25)

11 a Explain the basic principles and choice of control limits.
OR
b State the importance of statistical method in Industrial Research.

12 a Explain the construction of x and R charts.
OR
b Explain Double sampling plan.

13 a Explain the concept of Evolution of total quality.
OR
b Explain the fundamentals of TQM.

14 a Write shortly on process capability index.
OR
b Explain the quality improvement using statistical process control.

15 a Derive the expressions for i) Reliability function and ii) Hazard function.
OR
b Derive Hazard rate when the life time is Negative exponential distribution.

SECTION - C (30 Marks)
Answer any **THREE** Questions
ALL Questions Carry **EQUAL** Marks (3 x 10 = 30)

16 Explain the process and product control in industrial statistics.

17 Explain the construction of p and np charts.

18 Explain in detail of various TQM Models.

19 Narrate the importance of process capability and process capability index.

20 Explain the reliability function for series, parallel and k out of n system with suitable examples.