

Exam Date & Time: 29-Sep-2020 (10:00 AM - 01:45 PM)



## PSG COLLEGE OF ARTS AND SCIENCE

Note: Writing 3hrs: Checking & Inserting Image : 30mins

**BSc DEGREE EXAMINATION MAY 2020**  
(Sixth Semester)

**Branch - STATISTICS**

**STATISTICAL QUALITY CONTROL-II [16STU22]**

Marks: 75

Duration: 210 mins.

### SECTION A

Answer all the questions.

- 1) What is TQM? (2)
- 2) Define Quality. (2)
- 3) What is meant by Statistical process control? (2)
- 4) Define Control Charts. (2)
- 5) Write the types of control charts for attributes. (2)
- 6) State the formulae for control limits on c-chart. (2)
- 7) What is process capability? (2)
- 8) What is the main goal of SPC? (2)
- 9) Define Reliability. (2)
- 10) Define Failure Rate. (2)

### SECTION B

Answer all the questions.

- 11) Explain the needs for Quality improvement. (5)
  - a) [OR] Discuss about the fundamentals of TQM. (5)
  - b)



- 12) Explain Failure Model effect. (5)
- a)  
[OR] Explain chance and assignable causes of variation. (5)  
b)
- 13) What are the applications of c-chart? (5)
- a)  
[OR] Derive the limits for u-chart. (5)  
b)
- 14) Write a short note on process capability index. (5)
- a)  
[OR] Explain Quality improvement. (5)  
b)
- 15) Explain the concept of IFR. (5)
- a)  
[OR] Describe Constant Failure Rate. (5)  
b)

### SECTION C

Answer 3 out of 5 questions.

- 16) Explain the elements of TQM. (10)
- 17) Derive the steps for  $\bar{x}$ -chart and R-chart in control charts. (10)
- 18) Construct the limits for p chart and np-chart. (10)
- 19) Describe process capability ratio for an off center process. (10)
- 20) Explain in detail the exponential distribution in reliability. (10)

-----End-----