**21MAT45 – PROBABILITY AND STATISTICS**

**CAT 2-QUESTION BANK**

**PART A**

**UNIT 3**

1.State any two properties of t-distribution.

2.State the conditions under which chi-square test of goodness of fit is valid.

3. What are the expected frequencies of 2x2 contingency table

4. Write the applications of ‘F’ test.

5. Write the applications of test.

**UNIT 4**

1. State the basic principles of experimental design.
2. Define ANOVA
3. What are the basic assumptions in analysis of variance?
4. Write down the ANOVA table for Two-way classification
5. Write down the ANOVA table for one-way classification.
6. Compare and contrast Latin Square design and Randomized block design.
7. Why a 2x2 Latin square design is not possible ? Explain.
8. What are the advantages of the latin square design over other designs
9. Write down the ANOVA table for latin square design.
10. What are the uses of analysis of variance ?

**UNIT 5**

1. Distinguish between Chance variation and Assignable variation.
2. Define process and product control.
3. Explain briefly the types of Control Charts for attributes.
4. What is control chart?
5. What is meant by Statistical Quality Control?
6. Distinguish between defects and Defectives.
7. Discuss the merits and demerits of p-chart
8. Define Producer’s risk and Consumer’s risk.
9. Mention any two uses of Statistical quality control.
10. Mention any two practical situations where C-chart is needed.