Mid Term Syllabus (ODD Sem 2020-2021)

Probability and Statistics

(Subject Code: MA 202)

1: Classical definition of Probability; Frequency definition; Axioms; Examples.

2: Deduction of formulas for mutually and not mutually exclusive events; Examples.

3: Independent and stochastically independent events; Conditional Probability; Baye's Theorem.

4: Bernouli's trial, Binomial Law, Poisson trail; Poisson approximation.

5: Random Variable; Probability distribution function; Probability density function.

6: Important continuous and discrete distribution functions.

7: Transformation of random variables.

8: Two dimensional distributions: discrete.

9: Bivariate Conditional distributions (Discrete)

10: Transformation of random variables in two dimensions; Mutually Independence.

11: Mathematical expectation or Mean value; Moments; Variance.

12: Physical interpretations of Mean and Variance; Third central moment; Fourth central moment.

13: Moment generating function; Characteristic function.

14: Median; Mode; Quartiles; Skewness; Kurtosis.