Junior Research Fellowship for Research Course in Statistics

The candidates for research course in Statistics will have to take two short-answer type tests – STA and STB. Each test is of two-hour duration. Test STA will have about 10 questions of equal value, set from selected topics in Mathematics and Statistics at the undergraduate level. Test STB will have roughly 8 questions of equal value, on topics in Statistics at Master’s level.

Syllabus for STA

Mathematics

Functions and relations. Matrices – determinants, eigenvalues and eigenvectors, solution of linear equations, and quadratic forms. Calculus and Analysis – sequences, series and their convergence and divergence; limits, continuity of functions of one or more variables, differentiation, applications, maxima and minima. Integration, definite integrals, areas using integrals, ordinary linear differential equations.

Statistics


(d) Design of Experiments: Inference in linear models. Standard orthogonal and non-orthogonal designs. Analysis of general block designs. Factorial experiments. One and two-way ANOVA.


Syllabus for STB

Statistics: same as the syllabus of Statistics for STA