Reliability Analysis of Structures

Introduction to basic probability concepts and standard probability distributions in Civil Engineering. Functions of random variables.

Elements of reliability analysis, Methods of reliability analysis, FOSM method, FORM, SORM and Monte Carlo simulation method.

Application of reliability theory to Civil engineering Systems: Buildings and bridges, Pile-supported structures, Pile-line systems, Geotechnical systems – Shallow and deep foundations, Slopes and retaining wall and Offshore structures.

Introduction to decision analysis – Concepts of utility theory, Posterior analysis, Preposterior analysis. Introduction to seismic reliability analysis.

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Mrs Sheela
for Senate approval.