

KHAJA BANDANAWAZ UNIVERSITY, KALABURAGI

Faculty of Engineering & Technology

Civil Engineering Department

Syllabus for Ph.D Entrance Exam (2025-26)

SECTION I: Subject Specific

(Core Civil Engineering & Emerging Areas)

- **Concrete technology:** Properties of fresh and hardened concrete, Special concretes, Non-destructive testing of concrete.
- **Design of concrete structures:** Principles of limit state design, Design of beams, Design of slabs Design of columns.
- **Design of Steel structures:** Steel structural fasteners, Tension, compression, flexural members Connections.
- **Earth quake Resistant Structures:** General features of earth quakes with regard to Indian continent, Earthquake Hazards in India, Earthquake Risk Evaluation and Mitigation
- **Design of High-Rise Structures:** Design philosophy, loading, sequential loading, and materials – high performance concrete, fiber reinforced concrete, lightweight concrete, design mixes. Loading and Movement
- **Advance Solid Mechanics:** Theory of Elasticity, Plane stress and plane strain, Principal stresses and principal strains