

HEALTH ASSESSMENT & REMEDIAL MEASURES FOR G+5 SUPER-SPECIALTY BLOCK OF S.P MEDICAL COLLEGE IN BIKANER

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Abstract:

The structural health assessment of the existing G+5 Super-Specialty Block at S.P. Medical College, Bikaner, aims to evaluate the integrity and durability of its reinforced concrete (RC) elements in the structure. A systematic visual inspection will be conducted to identify surface deterioration, cracks, spalling, and other structural anomalies. Non-Destructive Testing (NDT) techniques will be employed to assess in-situ concrete strength, surface hardness, and internal homogeneity. Corrosion potential of embedded reinforcement will be evaluated using Half-Cell Potentiometer and Carbonation Depth tests to determine active corrosion risks. Diameter loss of rebars in critical RC members will be assessed to estimate structural capacity reduction. Additionally, chemical analysis of concrete samples to determine pH levels, chloride ingress, and sulfate concentration, which are crucial indicators of long-term durability. The findings from this assessment will facilitate the formulation of effective remedial measures, ensuring structural stability, service life enhancement, and compliance with safety standards.

Objectives:

1. Visual inspection of different parts of the hospital building.
2. NDT for assessment of deterioration in concrete quality by Rebound Hammer and Ultrasonic Pulse Velocity (UPV) test at selected locations in RCC columns/beams/slabs of every floor.
3. Corrosion assessment on RCC elements such as slab, columns, and beams will be done using Half Cell Potentiometer, Carbonation test.

