



SNS College of Technology
Department of Civil Engineering



19CEE409- Repair and Rehabilitation of Structures

UNIT I

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Unit-I

MAINTENANCE AND REPAIR STRATEGIES



Syllabus:

- ❖ Maintenance, repair and rehabilitation
- ❖ Facets of maintenance
- ❖ Importance of maintenance
- ❖ Various aspects of inspection
- ❖ Assessment procedure for evaluating a damaged structure
- ❖ Causes of deterioration



Repair: *To bring back the position of the structure to its previous condition so it gives performance same as previously.*

It doesn't cover the strength aspect of the structures.

Some examples of repair.....

Decoration of structure, Painting, White Washing

- Checking the wiring of building
- Replastering of any wall if required
- Repairing of damaged flooring
- Repair of door and window
- Checking or repairing of pipe line connections, gas line connections and plumbing serveries.
- Relaying disturbed roof tiles



- Rehabilitation: *Rehabilitation of a building means returning a building or a structure to a useful state by means of repair, modification, or alteration.*
- It is related to the strength aspect of structures.
- To Bring back the position and condition of the structure by considering the strength aspect.
- Some of the examples of Rehabilitation.....
 - To fill the wide cracks using some suitable material
 - Injecting epoxy like material in to cracks in walls,columns,beams, etc.
 - Removal of damaged portion of masonry and reconstructing it using rich mortar mix.



Retrofitting:

❖ Assessing the existing condition of the structure and deciding which component of the structure should be repaired or restored based on all the future requirements of structure

❖ The retrofit enables to increase the original strength of the building.

The actions of Retrofitting includes

- Addition of shear wall or diagonal braces
- Modification of roofs
- Strengthening of foundation
- Modification of building plan etc...



MAINTENANCE

- It is the act of maintaining the building in its serviceable condition.
- It is defined as the work done to keep the Civil Engineering structures and work in a condition so as to enable them to carry out the functions for which they are constructed. The maintenance of structure is done to meet the following objectives
 1. Prevention of damages due to natural agencies and to keep them in a good appearance and working condition
 2. Repair of the defects occurred in the structure and strengthen them, if necessary