

NEB GRADE-XII

2080 (2023)

**Maintenance and Rehabilitation of Structure
(Old Course)**

(For partial/grade improvement students whose first two digit of registration
number starts from 78 or below)

Candidates are required to give their answers in their own words as far as practicable. The figures in the margin indicate full marks.

Time: 3 hrs.**Full Marks: 75**

Pass Marks: 27 (Only for partial students)

Attempt **all** questions.**Group 'A'****Very short answer questions.**

5x3=15

1. List the minor and major repair works for structures (Buildings).
2. What is efflorescence ? What are the causes of efflorescence ?
3. Distinguish between estimates and tender.
4. What chemicals are used to remove rust from reinforcement bars ?
5. Explain in brief how cracks are formed in walls.

Group 'B'**Short answer questions.**

6x5=30

6. Distinguish between rehabilitation (restoration), strengthening and retrofitting.
7. Describe the application procedure of repair chemicals for concrete.
8. Discuss about significance and components of rainwater harvesting system.
9. Describe the construction procedure of underground water tanks with Ferrocement.
10. Explain the steps involved in planning, layout and construction of compound walls with bricks.
11. How would repair RCC structures be damaged due to fire ?

Group 'C'**Long answer questions.**

3x10=30

12. Explain the different techniques and methods used for the repair of rain water leakage in buildings.
13. Explain about chemical analysis of concrete carried out for damage detection.
14. Explain the methods of determination of strength, economic and age of old building.