

**BHARTIYA INSTITUTE OF ENGINEERING & TECHNOLOGY, SIKAR**  
**DEPARTMENT OF CIVIL ENGINEERING**  
**IMPORTANT QUESTION BANK – 6CE6.3A RRS**

- Q. 1** What do you mean by abrasion and erosion in concrete structures? Also explain permeability of concrete?
- Q. 2** What are the different types of cracks in concrete? Explain the preventive measures of cracks.
- Q. 3** Explain the following –
- a) Carbonation
  - b) Chloride ingress
  - c) Alkali Aggregate reaction
  - d) Sulphate attack
- Q.4** Explain F&T deterioration in detail. What is the maximum saturation of concrete for F&T action? What are the various preventive measures against F&T action?
- Q. 5** Explain ultrasonic pulse velocity test for concrete with figures and how the velocity values indicate quality of concrete?
- Q. 6** What do you mean by NDT? Write down the principle and procedure behind Rebound Hammer.
- Q. 7** Explain penetration resistance test and rebar locator of concrete.
- Q. 8** Explain Half-cell potential method of corrosion assessment & it's typical limiting values.
- Q. 9** Explain the failure pattern of FRP based repair.
- Q. 10** Explain 'self curing compounds', their properties and selection criterion.
- Q. 11** Write down the properties of FRP. Enlight some reasons due to which these are used as repairing material.
- Q. 12** Explain 'ferrocement', utility of normal reinforcing bars in it, and properties of ferrocement.
- Q. 13** Write short note on :
- (i) Polymer
  - (ii) Resin
- Q. 14** Explain "Guniting" and "Bonding Aspect".
- Q. 15** What do you mean by Grouting? Explain different types of grouting.
- Q. 16** What is the main purpose of Jacketing? What is the technique behind this method?
- Q. 17** Explain different techniques for 'under water repair' with use of figures.
- Q. 18** Discuss any case study while rehabilitating the structure, with proper steps in details.