

[Total No. of Questions: 08]

[Total No. of Pages: 01.]

MORNING

23 JUN 2023

Uni. Roll No.

Program: M.Tech. (Batch 2019 onward)

Name of Subject: Structural Health Monitoring & Retrofitting

Subject Code: MST-115

Paper ID: 17750

Scientific calculator is Not Allowed

Detail of allowed codes/charts/tables etc : NA

Time Allowed: 03 Hours

Max. Marks: 100

NOTE:

- 1) Attempt all questions
- 2) Any missing data may be assumed appropriately

Part-A (4 @ 5 = Marks)

- Q1. Explain in detail mechanism of carbonation induced corrosion, suggest suitable remedial measures?
- Q2. What are the barriers in structural health monitoring.
- Q3. What is quality control of in structures.
- Q4. Enumerate the various cracks repairs techniques and other repair techniques for structures.

Part-B (4 @ 20 = 80 Marks)

- Q5. What are smart materials and explain their applications in structural health monitoring.

Or

What are the sensors in structural health monitoring?

- Q6. Examine the role of chemical compounds on the durability of concrete.

Or

What are the aims of quality control system? Explain in detail.

- Q7. Define and explain in detail about electro-mechanical impedance (EMI) technique.

Or

What are the structural health monitoring challenges in present scenario.

- Q8. What is the various model-based techniques in dynamic structural health monitoring.

Or

Explain the Loading Methods in static structural health monitoring system.
