



NPTEL ONLINE COURSE
STRUCTURAL HEALTH MONITORING

TUTORIAL 4

Answer all the questions (Total marks: 20)

PART -A (5X1=5)

1. _____ provides the base line for comparing response of a structure before and after damage.
2. Significant changes in the vibration characteristics can lead to _____.
3. Expression for damage sensitivity is not applicable for structures with _____.
4. Both the crack location and change in size depends on the changes in _____ and _____ of the structure before and after the damage.
5. Significant changes in _____ can enable a convenient damage detection process.

PART -B (5X3=15)

1. What is the basic feature of vibration-based SHM?
2. List the steps involved in vibration-based SHM.
3. Draw the flow chart describing the vibration-based monitoring.
4. Define Modal sensitivity.
5. What is the basic assumption in the method used to identify damage by element modal stiffness?