NPTEL ONLINE COURSE
STRUCTURAL HEALTH MONITORING
TUTORIAL 1

Answer all the questions (Total marks: 20)

\[ PART - A \ (5 \times 1 = 5) \]

1. \underline{\text{__________}} is required to understand the response behaviour of the offshore structures under loading conditions.

2. \underline{\text{__________}} deals with the assessment of actual conditions and load carrying capacity of the structural systems.

3. \underline{\text{__________}} is required to process the strain variation caused by the damages in local scale detected on the sensor coatings.

4. In imaging ultrasonic sensors, \underline{\text{__________}} generates signal that pass through the material.

5. If the system functionality is lost, it is called \underline{\text{__________}}

\[ PART - B \ (5 \times 3 = 15) \]

1. Why Structural Health Monitoring (SHM) is vital for offshore structures?

2. How SHM can be useful in detecting early risks?

3. What are the commonly used tools of SHM for aviation industry?

4. Differentiate active and passive SHM.

5. Classify damages that can occur to a system with respect to the scale of damage