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SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)

M.Tech I Year I Semester Supplementary Examinations November 2020

STRUCTURAL HEALTH MONITORING

(Structural Engineering)

Time: 3 hours

Max. Marks: 60

(Answer all Five Units **5 x 12 = 60** Marks)

UNIT-I

- 1 a** Explain the Challenges in implementation of Structural Health Monitoring System. **6M**
b Discuss about Effective Structural Health Monitoring System Methodology. **6M**

OR

- 2 a** Differentiate between Non-Destructive Evaluation (NDE) and Structural Health Monitoring. **6M**
b Explain the Limitations of Non-Destructive Evaluation (NDE) Techniques. **6M**

UNIT-II

- 3** Explain the Applications of Structural Health Monitoring in Engineering Structures. **12M**

OR

- 4 a** Explain the Elasticity Equations for Plate Vibration. **6M**
b Explain the General Equations for Axial Vibrations of Rectangular Plates. **6M**

UNIT-III

- 5 a** Differentiate between Non-Destructive Testing and Destructive Testing Methods. **6M**
b Explain importance and Need of Non-Destructive Testing. **6M**

OR

- 6 a** Explain Principle of Thermography and give its Applications and Limitations. **6M**
b What is Acoustic Emission Testing (AET) ? Explain Briefly. **6M**

UNIT-IV

- 7** Explain the Principle, application and disadvantages of Ultrasonic Testing Technique. **12M**

OR

- 8 a** Explain principle and procedure for permeability test. **6M**
b What are the limitations of permeability test? **6M**

UNIT-V

- 9** Explain the Process of Guniting in Detail With Figure. **12M**

OR

- 10** Explain the methods of retro fitting techniques. **12M**

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