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Question Paper Code:U2918

M.E. DEGREE EXAMINATION, APRIL 2024

Second Semester

Power Electronics and Drives

21PSE518–STRUCTURAL HEALTH MONITORING

(Regulations 2021)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART - A (5 x 20 = 100 Marks)

1. (a) Predict the various categories of deterioration. CO1-Ap (20)
Or
(b) Demonstrate the mechanism of early thermal cracking in fresh concrete and their remedial measures. CO1-Ap (20)
2. (a) Explain the causes of collapse in structural health monitoring. CO1-Ap (20)
Or
(b) Explain the importance of seismic structural health monitoring. CO1-Ap (20)
3. (a) Analyze and adapt the suitable sensor systems in static structural health monitoring. CO3-Ap (20)
Or
(b) Demonstrate the term Static Response Measurement. CO3-Ap (20)
4. (a) Justify the role of Hardware in Remote Data Acquisition Systems. CO3-Ap (20)
Or
(b) Summarize the pros and cons of model based techniques in vibration based structural health monitoring. CO3-Ap (20)
5. (a) Classify the functioning of smart materials used in structural health monitoring. CO2-Ap (20)
Or
(b) Explain the application and Adaptations of EMI technique in structural health monitoring. CO2-Ap (20)

