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Question Paper Code: U2917

M.E. DEGREE EXAMINATION, MAY 2024

Elective

21PSE517 – SMART MATERIALS AND SMART STRUCTURES

(Regulation 2021)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (5 x 20 = 100 Marks)

1. (a) On the construction of newly planned city develop the steps involved in various sensing systems. CO2-App (20)
Or
(b) As a Engineer list out the benefits of smart structures and the importance of smart city construction. CO2-App (20)
2. (a) Analyze the process of Strain Rosettes in detail CO1-Ana (20)

(b) Analyze and design the process of Temperature Compensation in detail. CO1-Ana (20)
3. (a) Prepare a detail report on various types of sensors in smart structures. CO2-App (20)
Or
(b) List out the challenges to be faced while installing advanced technologies for Absorptive chemical sensors. CO2-App (20)
4. (a) Construct a database model for Magneto structure Material CO2-App (20)
Or
(b) Examine in detail about Shape Memory Alloys. CO2-App (20)

5. (a) Design a communication network for a Signal Processing and Control for Smart Structures. CO3- App (20)

Or

(b) As a Structural expert suggest the Signal Processing for a newly framed smart city. CO3- App (20)