

Reg. No. :

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Question Paper Code:U5518

Professional Elective

Structural Engineering

21PSE518–STRUCTURAL HEALTH MONITORING

(Regulations 2021)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART - A (5 x 20 = 100 Marks)

1. (a) Determine the impact of creeping in concrete and recommend remedial actions. CO2- App (20)
Or
(b) What are various procedures involved in structural health monitoring and explain benefits of structural health monitoring. CO2- App (20)
2. (a) Conclude the occurrence of distress due to Preconstruction stage, Construction stage and Post construction stage. CO1-App (20)
Or
(b) Examine the commonly used NDT tests and write its advantages over other tests. CO1-App (20)
3. (a) Illustrate different Types of Static Tests in detail comparing with genuine circumstance. CO3- App (20)
Or
(b) Explain in detail various strain gauges and their importance in static field testing. CO3- App (20)
4. (a) Discuss the various model based techniques in dynamic structural health monitoring. CO3-App (20)
Or
(b) Discuss the advantages and disadvantages of Static Field Test based structural health monitoring? CO3-App (20)

5. (a) Examine the execution process of Repairs and Rehabilitations of Structures in detail. CO2- App (20)

Or

(b) Explain the importance of electromagnetic independence technique in structural health monitoring. CO2- App (20)