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Question Paper Code: 56U01

Ph.D. COURSE WORK EXAMINATION, APRIL 2019

Elective

Structural Engineering

15PSE601 – RESEARCH METHODOLOGY

(Regulation 2015)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART - A (5 x 20 = 100 Marks)

1. (a) How do you define research problem? Explain the various techniques used in defining a problem. CO1- U (20)

Or

(b) Explain in detail the types of research. CO1- U (20)

2. (a) Define research design. Briefly explain about the various types of research designs and the factors influencing the research design. CO2- U (20)

Or

(b) Explain the meaning of the following in the context of Research Design CO2- U (20)

Design

- a) Extraneous Variables
- b) Confounded relationship
- c) Research hypothesis
- d) Experimental and control groups
- e) Treatments

3. (a) Discuss about the various techniques used for data collection. CO3- U (20)
- Or
- (b) Explain the following sample designs: CO3- U (20)
- a) Deliberate Sampling
 - b) Systematic Sampling
 - c) Stratified Sampling
 - d) Cluster and area Sampling
 - e) Multi-Stage Sampling
4. (a) Enumerate briefly the mechanism of report writing and underline the precaution to be taken at the time of report writing. CO4- U (20)
- Or
- (b) Explain the different types of research reports. CO4- U (20)
5. (a) Write an elaborate note on plagiarism and citation basics. CO5- U (20)
- Or
- (b) Explain how the copy right and royalty can be obtained using the IPR and Patent Law. CO5- U (20)