

Reg. No. :

Name :

Ph.D. ENTRANCE EXAMINATION, NOVEMBER 2022

FACULTY OF ENGINEERING AND TECHNOLOGY

CIVIL ENGINEERING

Time : 3 Hours

Max. Marks : 100

Instructions :

- 1) Answer **any ten** questions each from Section **A** and **B**.
- 2) Each question carries **5** marks.
- 3) No additional Answer sheets will be provided.
- 4) Candidates should clearly indicate the section, Question number in the answer booklet.

Section – A

Research Methodology

- I. Answer any **ten** questions. All Questions carry equal marks.
1. What do you mean by Scientific study? Mention its merits.
 2. Explain “double blind study”.
 3. What are the parameters to be considered while doing topical research?
 4. What is the case study method of research?
 5. List out the factors to be considered while conducting interviews.
 6. Explain observational research.
 7. What are the advantages of qualitative research methodology?

8. What is meant by inductive reference?
9. What are the advantages of sampling?
10. What are the reasons for research and development to become an index of development of the Country?
11. What is meant by deductive reasoning?
12. Define research.
13. Explain quantitative method.
14. What are dependent and independent variables?
15. What is theoretical framework?

(10 × 5 = 50 Marks)

Section – B

Civil Engineering

- II. Answer any **ten** questions. All Questions carry equal marks.
1. What is the purpose of providing cover to concrete? As per IS: 456-2000 list out the clear cover needed for various structural elements.
 2. Explain the term determinate and indeterminate structures.
 3. What are the different types of cement?
 4. In prestressing work, if more than one wire or strand is included in the same duct, why should all wires/strands be stressed at the same time?
 5. How can unreinforced concrete pavement function without mesh reinforcement?
 6. What is the importance of air void content in bituminous pavements?
 7. What is the difference between working stress approach and limit state approach?
 8. Define open channel flow with examples.

9. Explain the classification of hydraulic jumps.
10. What are the methods of population forecasting?
11. List the various types of water demand.
12. What is meant by hammering effect?
13. What is the chemical composition of Portland cement?
14. What is the requirement of curves on the road? What are the different types of curves?
15. What is the difference between a one-way slab and a two-way slab?

(10 × 5 = 50 Marks)