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Name.....

Reg. No.....

Ph.D. PRELIMINARY QUALIFYING EXAMINATION, DECEMBER 2020

Education

Paper I—RESEARCH METHODOLOGY

Time : Three Hours

Maximum : 70 Marks

Part A

Answer any two questions. Each question carries 15 marks.

- 1. Consider this example : The Student Police Cadet in Kerala is doing commendable contributions in promoting civic sense among the school children. Identify a problem from this example and Prepare a research proposal based on it. The proposal must contain : (i) Very brief need and significance of the study ; (ii) Research questions/ hypotheses ; and (iii) Procedure or methodology for the study.
2. Students were given two methods of teaching Viz, X and Y, before their examination. Some were given X some Y and for some NO treatment. The exam scores (in percentage) are shown below for the three groups :

Table with 4 columns: Treatment (X, Y, No treatment) and 5 rows of scores (70, 77, 83, 90, 97) and summary statistics (Mean, Variance, Grand Mean, Grand Variance).

Carry out ANOVA to test the hypothesis that the different methods will have different effect. Suggest follow-up comparisons (with weights) as continuation to the above analysis.

Turn over

3. What distinguishes a quantitative research design from a qualitative research design? Give example of a research question/ hypothesis and discuss (i) which design would be best to study, and (ii) Why?
4. What is the difference between directional and Non- directional hypothesis? Give examples for both. How do you determine whether you have a directional or non-directional hypothesis?

(2 × 15 = 30 marks)

### Section B

Answer any **eight** questions.

Each question carries 5 marks.

5. Discuss the differences between the descriptive and the inferential approaches in statistics. Are they contrary or complementary? Illustrate with an appropriate example.
6. What do you mean by Bracketing in Phenomenological research? Do you think that bracketing can be carried out perfectly in a research?
7. Define type I and type II errors? How these errors can be minimized in research?
8. Explain the rationale behind selecting various types of research approaches in Educational Research
9. "A research scholar has to work as a judge and derive the truth and not as a pleader who is only eager to prove his case in favour of his plaintiff." Discuss the statement pointing out the objectives of research.
10. Explain the concept of sampling error. Briefly explain various types of sampling errors encountered in educational research.
11. What are the different levels of coding used in content analysis?
12. What is reliability and validity of measurement. Explain procedure for testing reliability and validity of survey instrument used in your research.
13. Explain in detail techniques involved in defining a research problem.
14. "Research design in exploratory studies must be flexible but in descriptive studies, it must minimize bias and maximize reliability." Discuss.
15. Write a short note on Ex-post facto research.
16. Comment on the scope of Grounded theory approach in Educational research. Give at least two examples.

(8 × 5 = 40 marks)