CBCS SCHEME

14PHDRN USN Ph.D./M.Sc. (Engg.) by Research Degree Examination, April 2018 Research Methodology Max. Marks: 100 Time: 3 hrs. Note: Answer any FIVE full questions. a. Briefly describe the different steps involved in a Research process. 10 Marks) b. Explain about the basic types of research: ii) Applied Vs Fundamental research. i) Descriptive Vs Analytical research (10 Marks) iii) Conceptual Vs Empirical research. a. Explain the meaning of the following: i) Extraneous variable Confounded Experimental and Control groups relationship iii) Research hypothesis (10 Marks) v) Treatments. (10 Marks) b. Explain the Research diagram. a. What are the sources of secondary data? Discuss the advantages and disadvantages of (10 Marks) secondary data. b. Describe briefly with reference to scale construction techniques : (10 Marks) ii) Multidimensional scaling. i) Likert type scales a. Briefly discuss the basic measurement of scaling techniques, with suitable examples. (10 Marks) b. What is Probability Sampling Techniques? Discuss various methods under probability (10 Marks) sampling technique. a. Explain in brief the factors for systematic bias with a reference to criteria of selecting a (10 Marks) b. Explain briefly with a reference to interview method: (10 Marks) i) Personal interviews Telephonic interviews. a. Write the procedure for hypothesis testing. (10 Marks)

i) Null hypothesis ii) Level of significance a. Describe the precautions that the researcher should take while interpreting his findings.

b. Explain briefly on testing the hypothesis:

(98 Marks) (12 Marks) Explain briefly the different types of report.

(10 Marks)

iii) Type - I and Type - II errors.

a. Write the different steps involved in writing report. (10 Marks) b. Describe in brief, the layout of a research report, covering all relevant points. (10 Marks)