

[This question paper contains 2 printed pages.]

Your Roll No.....

Sr. No. of Question Paper : 9732

K

Unique Paper Code : 2373010014

Name of the Paper : Research Methodology

Name of the Course : DSE

Semester : VII (NEP-UGCF)

Duration : 3 Hours

Maximum Marks : 90

Instructions for Candidates

1. Write your Roll No. on the top immediately on receipt of this question paper.
2. Attempt **five** questions in all. Question no. **1** is compulsory.
3. **All** questions carry equal marks.
4. Use of non-programmable scientific calculator is allowed

1. (a) Fill in the blanks :

- (i) A nominal scale classifies of variable into _____.
- (ii) Extending the conclusion from observed instances to unobserved instances is also called _____.
- (iii) Information collected directly from the origin specifically for a research objective is known as _____ data.
- (iv) _____ comes right before the formulation of the hypothesis in the research.
- (v) The two most commonly used reference styles in academic writing _____ are and _____.
- (vi) A non- parametric test is defined on as the hypothesis test when population parameters are _____. (0.5×6)

(b) Mention the three primary purposes of research.

(c) Explain the difference between collection of data through questionnaires and schedules.

(d) Explain the terms: Fundamental research and basic research.

(e) Differentiate between sampling error and non-sampling errors with suitable examples.

(f) Describe at least three points of good quality report. (3×5)

P.T.O.

2. (a) What do you mean by research ethics? Describe its need and importance in conduct of research.
- (b) What do you mean by sample design? What points should be taken into consideration by a researcher in developing a sample design for the research project? (9,9)
3. (a) Define the following :
- (i) Applied research and fundamental research.
 - (ii) Exploratory, descriptive and causal research.
 - (iii) Qualitative and quantitative research.
- (b) A random sample of size n has 53 as mean. The sum of squares of deviations taken from mean is 135. Can this sample be regarded as taken from the population having 56 as mean? Obtain 95% and 99% confidence limits of the mean of the population. (Given that the tabulated at 1% level of significance is 2.95 and at 5% level of significance is 2.13). (9,9)
4. (a) Describe in brief the four major operations for processing of data- editing, coding, classification and tabulation pointing out the significance of each in context of research study.
- (b) In a random sample of 100 persons taken from city A, 60 persons are found to be consuming beer. In another sample of 200 persons taken from city B, 100 persons are found to be consuming beer. Do the data reveal significant difference between the two cities so far as the habit of taking beer is concerned? Formulate appropriate null and alternate hypothesis, test and interpret using 5% level of significance (Given that the tabulated at 5% level of significance is 1.96). (9,9)
5. (a) What do you mean by data source? What are the two major types of data sources? Discuss briefly some sources of each type with their merits and demerits.
- (b) Discuss the different non-parametric tests and narrate the various advantages of using non- parametric tests. Also point out their limitations. (9,9)
6. (a) Explain what is meant by hypothesis testing. Also explain the level of significance in one tail test and two-tail test.
- (b) Differentiate between conclusion and generalization. Explain the need, meaning and essentials of interpretation. (9,9)