PART – C

5. Write short note on any **THREE** of the following :

(5,5,5)

(a) Assumptions underlying chi-square

(b) Z test

(c) Thurstone scale

(d) One-tailed and two tailed test

(e) Properties of random sampling distribution of mean

[This question paper contains 4 printed pages.]

22/5/18

Your Roll No...............

Instructions for Candidates

1. Write your Roll No. on the top immediately on receipt of this question paper.

2. Use of simple calculator allowed.

3. This paper consists of **three** parts. Attempt **two** questions from **Part A; two** questions from **Part B** and **Part C** is compulsory.

PART – A

1. Define sampling and discuss any two methods employed in non-probability sampling. (15)

Or

Elaborate upon various techniques of probability sampling.
(15)

2. Discuss the likert and semantic differential scales in detail.   (15)

Or

Give a comparison of quantitative and qualitative research.
(15)

PART – B

3. (a) Discuss the various assumptions of t-test.

(b) The results for two random samples from different populations are given below :

Sample 1 :   5,6,8,2,6

Sample 2 :   7,9,4,5,10

Conduct a non-directional test of no difference between the two population means at $\alpha = 0.05$ level of significance.   (5,10)

Or

(a) Discuss power of a test.

(b) A scientist wants to assess the impact of a drug on 100 people. A mean of 80 and SD of 16 was obtained. After using the drug for 5 months the group was tested

again with a mean of 65 and SD of 6. The correlation came out to be 0.60. Test the null hypothesis that there is no difference between the two groups at 0.05 level of significance.   (5,10)

4. (a) Explain assumptions of Chi-Square.

(b) Given the following data for **three** groups :

Group 1:   6,4,5,2

Group 2:   4,5,3,2

Group 3:   3,2,6,5

Test the hypothesis of no difference at 0.05 level of significance.   (5,10)

Or

(a) Describe the conditions/assumptions of non- parametric statistics.

(b) A sample of 100 women and 145 men presented attitude about demonetization as follows :

	Agree	Undecided	Disagree
Women	50	20	30
Men	45	25	25

Test the hypothesis that attitude is independent of sex of the respondents at .05 level of significance.
(5,10)