2124
## M.Com. (E.& F.B.) First Semester
### FB-104: Business Research

Time allowed: 3 Hours                                          Max. Marks: 80

NOTE: Attempt *five* questions in all, selecting atleast two questions from each Unit. All questions carry equal marks. Use of simple non-programmable calculator is allowed.

x-x-x

### UNIT-I

1. Define Research. Explain in detail the research process?

2. Discuss the various methods of collecting primary data.

3. The sales data of an item of six firms before and after a special publicity and promotion campaign are as under:

| Firms | A | B | C | D | E | F |
|---|---|---|---|---|---|---|
| Before Campaign | 53 | 28 | 31 | 48 | 50 | 42 |
| After Campaign | 58 | 29 | 30 | 55 | 56 | 45 |

Can the campaign be judged to be success? Test at 5% significance level.

4. Two groups X and Y consists of 100 people each affected in a disease. A serum is given to groups X and Y, 75 people from group X and 65 people from group Y are recovered. Test the hypothesis that the serum helps to cure the disease.

5. Explain the sampling and non-sampling errors?

### UNIT-II

6. Given N=10, $\Sigma x=140$, $\Sigma y=150$, $\Sigma (x-10)^2=180$, $\Sigma (y-15)^2=215$, $\Sigma (x-10)(y-15)=60$

   Find Karl Pearson co-efficient of correlation and estimate the value of y when x=15.

7. What are the assumptions for estimating the parameters of a simple regression model?

8. Draw the mean chart and range chart from the following data and state your conclusion:

| Sample No. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 12.8 | 13.1 | 13.5 | 12.9 | 13.2 | 14.1 | 12.1 | 15.5 | 13.9 | 14.2 | 135.3 |
| Range | 2.1 | 3.1 | 3.9 | 2.1 | 1.9 | 3.0 | 2.5 | 2.8 | 2.5 | 2.0 | 25.9 |

Given n=5, $A_2$= .577, $D_4$= 2.115, $D_3$=20

9. What is Statistical Quality Control? Explain the tools of Statistical Quality control?

10. What do you mean by Decision Making under uncertainty? What are its assumptions and limitations?