

**LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034**

**M.Com. DEGREE EXAMINATION – COMMERCE**

THIRD SEMESTER – APRIL 2010

**CO 3804 - RESEARCH METHODOLOGY**

Date & Time: 26/04/2010 / 9:00 - 12:00 Dept. No.

Max. : 100 Marks

**SECTION A**

**Answer All Questions:**

**10 x 2 = 20**

1. What is social research?
2. What do you mean by research design?
3. How do you measure the objectivity in research?
4. Explain the term primary data.
5. Write a note on structured interview.
6. Illustrate the questionnaire.
7. Why is bibliography used?
8. What is likert scale?
9. Explain the steps to calculate McNemer Test.
10. Mention any two suitable tests for ordinal data.

**SECTION B**

**Answer any five only:**

**5 x 8 = 40**

11. Mention the usefulness of social research.
12. Discuss the descriptive approach in detail.
13. Explain the characteristics of good hypothesis.
14. What are the sources of secondary data.
15. Discuss the contents of preliminary section in research report writing.
16. How do you make successful interview?
17. For nine animals, tested under control conditions and experimental conditions, the following values of a measured variable were observed:

| Animal No.   | 1  | 2  | 3  | 4  | 5  | 6   | 7  | 8  | 9  |
|--------------|----|----|----|----|----|-----|----|----|----|
| Control      | 21 | 24 | 26 | 32 | 55 | 82  | 46 | 55 | 88 |
| Experimental | 18 | 9  | 23 | 26 | 82 | 199 | 42 | 30 | 62 |

Test whether a significant difference exists between the medians, using the Wilcoxon Signed Rank Test. 5% level of significance N= 9 is 6.

18. Given the following sequence of 8 men (M) and 7 women (W) lined up to purchase ticket at a cinema counter, test if they are standing at random at 5% level of significance.  
MM / WWW / M / WW / MMM / WW / M

**SECTION C**

**Answer any two only:**

**2 x 20 = 40**

19. (a) Explain the objectives of research.  
 (b) Discuss the qualities of researcher.
20. Discuss the features of a good questionnaire.
21. The following table gives yields in quintals (with difference) for two varieties of apples *A* and *B*, each pair of trees being planted near together under similar conditions of soil, moisture, etc. The separate pairs are, however, scattered over various localities.

| $X_1 (A)$ | $X_2 (B)$ |
|-----------|-----------|
| 13        | 16        |
| 12        | 11        |
| 10        | 8         |
| 6         | 6         |
| 13        | 12        |
| 15        | 16        |
| 19        | 14        |
| 10        | 9         |
| 11        | 8         |
| 11        | 11        |
| 13        | 13        |
| 9         | 10        |
| 14        | 12        |
| 12        | 11        |
| 12        | 9         |

Use Sing test at 5% level of significance to test the  $H_0$  that there is no difference in the yield of the 2 varieties of apples against the alternative hypothesis that there is significant difference and draw a two tailed normal curve (Table value 1.98).

22. The following data represent the number of units of production per day turned out by 5 different workers using 4 different types of machines: use 40 as a coding of data.

|         |   | <i>Machine Type</i> |          |          |          |
|---------|---|---------------------|----------|----------|----------|
|         |   | <i>A</i>            | <i>B</i> | <i>C</i> | <i>D</i> |
| Workers | 1 | 44                  | 38       | 47       | 36       |
|         | 2 | 46                  | 40       | 52       | 43       |
|         | 3 | 34                  | 36       | 44       | 32       |
|         | 4 | 43                  | 38       | 46       | 33       |
|         | 5 | 38                  | 42       | 49       | 39       |

- (a) Test whether the mean productivity is the same for the different machine types.  
 For  $V_3 = 3.49$ .
- (b) Test whether the 5 men differ with respect to mean productivity. For  $V_4 = 3.26$ .

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