 LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

 **M.Sc.** DEGREE EXAMINATION - **MEDICAL LAB. TECHNOLOGY**

SECOND SEMESTER – **APRIL 2012**

# ML 2953 - METHODOLOGY OF MEDICAL LABORATORY RESEARCH

 Date : 21-04-2012 Dept. No. Max. : 100 Marks

 Time : 9:00 - 12:00

 **SECTION A**

**Answer ALL the Questions: (10 ×2 = 20 Marks)**

1. Define research.
2. List down the characteristics of good hypothesis.
3. Define impact factor.
4. Expand ICMR and CSIR
5. What is thrust area in research?
6. What is plagiarism?
7. What is patenting?
8. What are the advantages of data arrays over raw data?
9. Find the mean of the following data : 48, 52, 60, 57 and 62

10. Calculate the median : 26, 13, 7, 15, 11, 19 and 22

**SECTION B**

**Answer any FOUR of the following: (4 ×10 = 40 Marks)**

11. Describe the electronic tools used in research.

12. Write notes on different types of research.

13. Give short notes on citation index.

14. Explain the different steps in the formulation of research objective.

15. Elaborate different kinds of research programme in India and abroad.

16. The body weights collected from a population are 66.1, 77.1, 74.6, 61.8 and 71.5

 Calculate the standard deviation.

**SECTION C**

**Answer any TWO of the following: (2 ×20= 40 Marks)**

17. Describe research project proposal

18. Discuss research process with a neat flow chart.

19. Ethics in research-Explain.

20. The following is the data of health researchers who reported an inverse relationship between CNS malformations and hardness of related water supplies. Calculate coefficient of correlation.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| CNS malformation rate | 9 | 8 | 5 | 1 | 4 | 2 | 3 | 6 | 7 |
| Water Hardness (ppm) | 120 | 130 | 90 | 150 | 160 | 100 | 140 | 80 | 200 |

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