STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI – 600 086.
(For candidates admitted during the academic year 2004-2005 & thereafter)

SUBJECT CODE : CM/PC/RM24

M.Com. DEGREE EXAMINATION APRIL 2008
COMMERCE
SECOND SEMESTER

COURSE : MAJOR – CORE
PAPER : RESEARCH METHODOLOGY
TIME : 3 HOURS **MAX. MARKS : 100**

SECTION – A

ANSWER ANY FIVE QUESTIONS: **(5 x 8 = 40)**

1. What is a sample design? Discuss the points to be taken into consideration by a researcher in developing a sample design for his research project?

2. Distinguish between experimental approach and case study approach to life.

3. What are nominal, ordinal, internal and ratio measurements?

4. What is a hypothesis? What characteristics must it possess in order to be a good research hypothesis?

5. In a test given to two groups of students drawn from two normal population, the marks obtained were as follows:

Group A:	18	20	36	50	49	36	34	49	41
Group B:	29	28	26	35	30	44	46		

6. A total of 1,600 families were selected at random in a city to test the belief that high income families usually send their children to public schools and low income families often send their children to government schools. The following results were obtained:

Income	Schools		
	Public	Government	Total
Low	494	506	1000
High	162	438	600
Total	656	944	1600

(a) Construct a table of observed and expected frequencies.
(b) State the null and alternative hypothesis.
(c) Calculate the Chi-Square statistics and test whether income and type of schooling are independent @ 5% level of significance.

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7. The following data shows weekly sales of a manufacturer before and after recognition of the sales organization. 10 weeks from September to December in two successive year were selected for comparison:

Week No .	1	2	3	4	5	6	7	8	9	10
Sales (in '000s) : (before reorganization)	15	17	12	18	16	13	15	17	19	18
Sales (on '000s): (after reorganization)	20	19	18	22	20	19	21	23	24	24

Apply the 't' test to determine whether reorganization had any effect on the sales.

8. Samples of two different types of bulbs were tested for length of life, and the following data were obtained:

	Sample Size	Sample Mean	Sample S.D.
Type I	8	1,234 hours	36 hours
Type II	7	1,136 hours	40 hours

Is the difference in the means significant?

SECTION - A

ANSWER ANY THREE QUESTIONS: (3 x 20 = 60)

9. Examine the process involved in the formulation of a research project.
10. Discuss the structure of a research report.
11. Describe how the following scales are constructed.
    (a) Likert Scale (b) Thurstone's Scale
12. The following represent the number of units of production per day turned out by four different workers using five different types of machines;

Worker	Machine Type A	B	C	D	E	Total
I	4	5	3	7	6	25
II	5	7	5	4	5	28
III	7	6	7	8	8	36
IV	3	5	4	8	2	22
Total	19	23	21	27	21	111

On the basis of this information, can if be included that –
(i) The mean productivity is the same for different machines.
(ii) The workers don't differ with regards to productivity.

13. For a random sample of 10 persons, fed on diet A, the increase in pounds in a certain period were:
    10 6 16 17 13 12 8 14 15 9
    For another sample of 12 persons fed on diet B, the increase in the same period were:
    7 13 22 15 12 14 18 8 21 23 10 17
    Test whether diet a and diet B differ significantly as regards the effect on increase in weights.

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