

**STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 86  
(For Candidates admitted during the academic year 2011 – 2012 & thereafter)**

**SUBJECT CODE: 11EC/PC/RM14**

**M.A. DEGREE EXAMINATION NOVEMBER 2014  
BRANCH III – ECONOMICS  
FIRST SEMESTER**

**COURSE : CORE  
PAPER : RESEARCH METHODOLOGY, COMPUTER APPLICATIONS – I  
(THEORY)  
TIME : 2 HOURS**

**MAX.MARKS : 60**

**SECTION – A**

**I. Answer any three questions. Each question should not exceed 300 words.**

**(3 X 20 = 60)**

1. Describe in detail the different steps involved in a research process.
2. a) How could sample errors be minimized?  
b) What is the significance of Case studies?
3. Write short notes on
  - a) Logic of reasoning
  - b) Deduction and induction methods of research.
4. a) Explain Binary Cartesian Epistemology.  
b) Describe the process of analyzing data using EXCEL in economic research
5. What is meant by research design? Describe the procedures used in the preparation of a research proposal.

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**(PRACTICAL)**

**TIME : 1 HOUR**

**MAX.MARKS : 40**

**SECTION – B**

**Solve Any 4 Problems**

**(4X10 =40)**

1. The following table is given the number of companies belonging to two areas A and B according to the amount of profits earned by them. Draw in the same diagram their Lorenz curves and interpret them.

Profits earned in Lakhs	Number of companies	
	Area A	Area B
6	6	2
25	11	38
60	13	52
84	14	28
105	15	38
150	17	26
170	10	12
400	14	4

2. Four experiments determine the moisture content of soil samples. Each observer taking a sample from each of six fields. Their observations are:

observers	FIELDS					
	I	II	III	IV	V	VI
1	19	17	19	20	21	21
2	22	21	19	21	23	20
3	21	26	24	22	21	20
4	22	20	23	24	22	20

Perform analysis of variance on these data and discuss whether there is any significant difference between fields or between observers.

3. Following information is obtained in a sample survey:

Condition of child	Condition of home	
	Clean	dirty
Clean	70	50
Fairly clean	80	20
dirty	35	45

State whether the two attributes are independent. Use  $\chi^2$  test.

4. The following data are consumption expenditure in crores of rupees:

<u>Year</u>	<u>income</u>
1980	3193
1981	3236
1982	3275.5
1983	3454.3
1984	3640.6
1985	3820.9
1986	3981.2
1987	4113.4
1988	4279.5
1989	4393.7
1990	4474.5
1991	4466.6
1992	4594.5
1993	4748.9
1994	4928.1
1995	5075.6
1996	5237.5
1997	5423.9
1998	5683.7
1999	5968.4
2000	6257.8

Estimate a trend line on the data, and forecast the income for 2015.

5. Draw suitable diagrams with data of your own imagination.

- a) Pie diagram.
- b) Multiple bar diagram.
- c) Line diagram.

6. Based on the following data estimate the production function

a) Output =  $f(\text{labor, capital})$

b)  $\ln(\text{output}) = f(\ln(\text{labor}), \ln(\text{capital}))$

Output	labor	capital	lnoutput	Lnlabor	lncapital
38372840	424471	2689076	17.46286	12.9586	14.80471
1805427	19895	57997	14.40631	9.898224	10.96815
23736129	206893	2308272	16.98251	12.23996	14.65201
26981983	304055	1376235	17.11068	12.62496	14.13486
19462751	180366	1790751	16.78401	12.10274	14.39815
28972772	224267	1210229	17.18187	12.32059	14.00632
14313157	54455	421064	16.47669	10.90513	12.95054
159921	2029	7188	11.98244	7.615298	8.880168
47289846	471211	2761281	17.67181	13.06306	14.83121
63015125	659379	3540475	17.95889	13.39905	15.07977
1809052	17528	146371	14.40831	9.771555	11.8939
10511786	75414	848220	16.16801	11.23075	13.6509
90120459	835083	5832503	18.31666	13.63529	15.57896
39079550	336159	1795976	17.48111	12.72534	14.40106
22826760	246144	1595118	16.94344	12.41367	14.28246
38686340	384484	2503693	17.471	12.85966	14.73328
69910555	216149	4726625	18.06273	12.28372	15.36872
7856947	82021	415131	15.87691	11.31473	12.93635
21352966	174855	1729116	16.8767	12.07171	14.36312
46044292	355701	2706065	17.64511	12.78185	14.81101
92335528	943298	5294356	18.34094	13.75714	15.48215
48304274	456553	2833525	17.69303	13.03146	14.85703
17207903	267806	1212281	16.66088	12.49802	14.00801
47340157	439427	2404122	17.67287	12.99323	14.6927
2644567	24167	334008	14.78802	10.09274	12.71892
14650080	163637	627806	16.49996	12.00541	13.34999
7290360	59737	522335	15.80206	10.99771	13.16606
9188322	96106	507488	16.03344	11.47321	13.13723
51298516	407076	3295056	17.75317	12.91675	15.00793
20401410	43079	404749	16.83111	10.67079	12.91102
87756129	727177	4260353	18.29007	13.49693	15.26486

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