STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI – 86
(For candidates admitted from the academic year 2009-10 & thereafter)

SUBJECT CODE: EC/PC/RM24

M. A. DEGREE EXAMINATION, APRIL 2011
BRANCH III – ECONOMICS
SECOND SEMESTER

COURSE: MAJOR – CORE
PAPER : RESEARCH METHODOLOGY, COMPUTER APPLICATIONS – II (THEORY)
TIME : 2 HOURS **MAX. MARKS: 60**

SECTION – A

ANSWER ANY FOUR QUESTIONS. EACH ANSWER NOT TO EXCEED 300 WORDS.
(4 X 5 =20)

1. Discuss the criteria of co-efficient of determination and't' values of the coefficients in a multiple regression analysis.
2. What are the different classifications of data? Discuss the components of time series data.
3. With suitable illustrations explain the different sampling methods.
4. Define Research. Discuss the objectives and importance of research in social sciences.
5. What do you mean by Hypothesis? Discuss the steps involved and the significance of Type-I & Type-II errors in Hypothesis testing

SECTION – B

ANSWER ANY TWO QUESTIONS. EACH ANSWER NOT TO EXCEED 1200 WORDS.
(2 X20 =40)

6. A test is administered to a random sample of 10 students of University X. The sample test is also administered to a random sample of 11 students of University Y. The test score are as follows.

X:	70	68	76	81	86	58	62	75	83	48
Y:	72	67	74	65	63	77	71	60	76	61	64

Test whether the score of the two groups of students are significantly different.

7. Use OLS regression technique to find the magnitude of influence of Income on Consumption. What is the amount of consumption a person consumes when there is no income at all? Predict your level of consumption if your income were 15,000 and 17,000 respectively.

Income (in 000's):	12	11	14	6	10	7	9	11	10	10
Consumption (in 000's) :	10	7	10	4	8	8	6	7	9	11

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8. Write Short notes on the following:
    a) Logic in social science research
    b) Syllogism and the rules of syllogism.
    c) Structure and Figure of syllogism.
    d) Terminology of Fallacy in research
    e) Difference between truth and validity.

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BRANCH III – ECONOMICS
SECOND SEMESTER

COURSE: MAJOR – CORE
PAPER : RESEARCH METHODOLOGY, COMPUTER APPLICATIONS – II (PRACTICAL)
TIME : 1 HOUR **MAX. MARKS: 40**

Solve all 4 Problems: **[4 * 10 = 40]**

1. An MBA Aspirant was interested in knowing the impact of educational background (Arts / Engineering) on the final placement salaries. He is also aware that the previous work experience also has an impact on salaries. Therefore he chose educational Background and work experience as two independent variables. Based on educational background, respondents are categorised in to two groups, one with arts/commerce and the other with science/engineering, based on previous work experience, they are again classified into two groups one with work experience the other without. A sample of 30 students is randomly chosen and their salaries from campus recruitment as well as the information on educational background and work experience are collected. Salary is given in lakhs. Verify whether work experience and educational background has a significant impact on placement salaries, using Two Way ANOVA.

Student	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**
Edu_Background	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Work_Exp	1	1	1	1	2	1	1	1	2	2	1	2	2	2	2
Salary (in lakhs)	8.5	10.8	9.7	8.8	7.8	7.5	7.8	6.9	4.5	4.1	7.7	5.5	5.6	5.2	4.1
Student	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**
Edu_Background	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Work_Exp	1	1	1	2	2	1	1	1	2	2	2	2	2	2	1
Salary (in lakhs)	9.8	10.2	11	7.8	7.3	6.9	6.1	6.25	3.8	3.2	5.1	4.9	4.65	4.8	5.24

Note: Educational background: 1 represents Arts & Science and 2 represent Engineering

Work exp: 1 represents 'With Work Experience' while 2 represent Without Work Experience

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2. Given below is the data on monthly salary belonging to 51 randomly selected private workers from various regions viz., rural, urban and metro. Use dummy variable regression analysis to find if region has a significant effect on monthly wages.

Observation	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	
Salary	19583	20263	20325	26800	29470	26610	30678	27170	25853	24500	
Region	SU	SU	SU	SU	SU	SU	SU	SU	SU	SU	
Observation	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	
Salary	24274	27170	30168	26525	27360	21690	21974	20816	18095	20939	
Region	SU	SU	SU	SU	SU	SU	SU	SU	SU	SU	
Observation	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**	
Salary	22644	24624	27186	33990	23382	20627	22795	21570	22080	22250	
Region	SU	R	R	R	R	R	R	R	R	R	
Observation	**31**	**32**	**33**	**34**	**35**	**36**	**37**	**38**	**39**	**40**	
Salary	20940	21800	22934	18443	19538	20460	21419	25160	22482	20969	
Region	R	R	R	R	R	R	R	R	U	U	
Observation	**41**	**42**	**43**	**44**	**45**	**46**	**47**	**48**	**49**	**50**	**51**
Salary	27224	25892	22644	24640	22341	25610	26015	25788	29132	41480	25845
Region	U	U	U	U	U	U	U	U	U	U	U

3. Using the State-wise egg production and price data given below

a) Generate two new variables namely Sqrt. of X_1 and X_2. Convert variable X3 into a Numeric Variable.

b) Convert Egg production in 1990 into two categories (Equal to or less than 1500 Million as category 1 & Above 1500 million eggs as the category 2, Name this variable as **Pdn.Gr**.) Run a cross tabulation for the variable Pdn.Gr. and Region (X3). Interpret the same.

c) Use Chi-Square analysis and find if there is any significant relationship between Egg production and region

State wise egg production and price

STATE	Y1	Y2	X1	X2	X3
AP	2206	2186	8593.29	8353.96	S
Bihar	73	74	3721	3136	N
Gujarat	3620	3737	7447.69	8427.24	N
Haryana	7472	7444	4019.56	3410.56	N
HP	788	873	6052.84	5329	N
J&K	1029	948	11236	10816	N
Karnataka	168	164	13689	12769	S
Kerala	2568	2537	3844	3271.84	S
MP	4302	4301	6496.36	6528.64	S
Maharashtra	227.5	224.5	7225	7310.25	S
Orissa	187	203	6256.81	5314.41	S
Punjab	793	809	4225	4970.25	N
Rajasthan	5445	5290	3931.29	3612.01	N
TN	2151	2247	3192.25	2809	S
UP	404	389	2970.25	2284.84	N
Uttaranchal	412	483	4583.29	5402.25	N
West Bengal	273	254	13225	13225	N

Y1 = Eggs Produced in 1990, in Millions

Y2 = Eggs Produced in 1991, in Millions

X1 = Price Per Dozen in 1990, in Rs.

X2 = Price Per Dozen in 1991, in Rs.

X3 = North / South

4. With the below given data show if there is any significant difference between the marks of Students in 3 universities.

University	Students				
	1	2	3	4	5
A	90	70	60	50	80
B	70	40	50	40	50
C	60	50	60	70	60

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