STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 86 (For Candidates admitted during the academic year 2004 – 2005 & thereafter)

SUBJECT CODE : EC/PC/RM34

M.A. DEGREE EXAMINATION NOVEMBER 2007 BRANCH III – ECONOMICS THIRD SEMESTER

COURSE : CORE PAPER : RESEARCH METHODOLOGY – COMPUTER APPLICATIONS - II

TIME : 2 HOURS

MAX.MARKS: 60

SECTION – A

ANSWER ANY FIVE QUESTIONS. EACH ANSWER NOT TO EXCEED 300 WORDS 5 X 4 = 20

- 1. Discuss the advantages of computer in data anlaysis.
- 2. How is binary number system used in computers?
- 3. Explain any two operating systems.
- 4. Explain how regression output can be obtained using SPSS package.
- 5. What is a spread sheet? Discuss the menu contents in SPSS
- 6. Discuss the advantages of SPSS windows version over conventional versions of SPSS

SECTION – B

ANSWER ANY TWO QUESTIONS. EACH ANSWER NOT TO EXCEED 1200 WORDS 2 X 20 = 40

- 7. Elucidate the role of facts and theory in social research.
- 8. Discuss the nature and significance of social science research.

9. (a) Distinguish between parametric and non-parametric tests.

(b) The following data represent of number of units of production per day turned out by different workmen. Test whether the 4 men differ with respect to mean productivity

Workman	Machine Type								
	1	2	3	4	5				
1	8	10	7	12	6				
2	12	13	8	9	12				
3	7	8	6	8	8				
4	5	5	3	5	14				

(Table Value :3.49)

10. Outline the procedure of any two Non-parametric tests.

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COURSE	: CORE	
PAPER	: RESEARCH METHODOLOGY – COMPUT	ER APPLICATIONS - II
	PRACTICAL	
TIME	: 1½ HOUR	MAX. MARKS : 40

Answer All questions : (All questions carry equal marks)

4X10=40

1.

		Variety of fertilizers					
		1	2	3	4		
	1	6	5	5	7		
Variety of seeds	2	5	4	3	3		
	3	3	8	7	4		

Per acre production of wheat in relation to the different varieties of seeds and fertilizers is given above. Test whether the seed and fertilizer types affect wheat productivity significantly at 5% level.

2. The following data relate to how the rupee comes and goes. Represent an appropriate diagram.

Rupee comes		Rupee goes		
Items	Paise	Items	Paise	
Excise	22	Central Plan	25	
Customs	18	Interest	15	
Internal borrowing	18	Defence	13	
Non-tax revenue	14	Share of taxes	14	
Deficit	07	Other non-plan expenditure	12	
Other Capital receipts	07	State & UT plan assistance	17	
Corporation tax	06	Subsidies	5	
External assistance	03	Non-plan assistance	4	
Other taxes	03			

3. Construct a bi-variate frequency table classifying Incomes (X) into intervals 200-300, 300-400, ... and percentage expenditure on food (Y) for 25 families into 10-15, 15-30...

325	512 202	310 690 255 384	680 492	300	225 425 643	310 555 689		
Y: 12 12 21		18 25 11		15 51 18		26 29 19	20 27	18 18

Does the sample data satisfy the conditions of Normality.

4. The number of articles produced by four different operators working on 2 different types of machines I & II on different days of the week is given below. Determine at 5% level whether there are significant differences in (a) the operators (b) the machines.

			MACHINE – I				MACHINE – II				Ι
		Μ	Т	W	Т	F	Μ	Т	W	Т	F
OPERATIONS	A	15	18	17	20	12	14	16	18	17	15
	В	12	16	14	18	11	11	15	12	16	12
	С	14	17	18	16	13	12	14	16	14	11
	D	19	16	21	23	18	17	15	18	20	17

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	PRACTICAL	
TIME	: 1½ HOUR	MAX. MARKS : 40

Answer All questions : (All questions carry equal marks)										4X10=40	
1.											
	Firm :	1	2	3	4	5	6	7	8	9	10
	Output:	15.9	20,0	25.1	39.8	25.2	63.1	50.1	79.4	15.8	31.6
	Labour:	12.6	15.8	25.2	50.1	31.6	63.1	79.5	39.8	15.8	39.9
	Capital:	31.7	25.2	31.6	25.1	31.7	50.2	31.6	12.6	19.9	15.8

(a) Compute the marginal products of the two factors of production at their mean rates.

b) Compute the standard error of the estimates. Compute r^2 . Interpret.

c) Construct 95% confidence interval for the true slope coefficients.

2. Analyse the impact of seasonal variation on GDP. Interpret the results.

Year	GDP in million of dollars in I, II, III, IV Qtrs.								
1970	2872.8	2860.3	2896.6	2873.7					
1971	2942.9	2947.4	2966.0	3980.8					
1972	3037.3	3089.7	3125.8	3175.5					
1973	3253.3	3267.6	3264.3	3289.1					
1974	3259.4	3267.6	3239.1	3226.4					
1975	3154.0	3190.4	3249.9	3292.5					
1976	3356.7	3369.2	3381.0	3416.3					
1977	3466.4	3525.0	3574.4	3567.2					
1978	3591.8	3707.0	3735.6	3779.6					
1979	3780.8	3784.3	3807.5	3814.6					
1980	3830.8	3732.6	3733.5	3808.5					

- 3. A super market is interested in knowing the preference of its customers in order to evolve better ways of providing shopping facilities to its customers. Frame a questionnaire with this as its objective.
- 4. Data gives information regarding retail prices of three brands of shoes. Using an appropriate tool, determine whether there is only significant difference among the prices(\$) of brands at 5 level.

Brand A:	89 85	90 95	92 97	81 86	76 100	88
Brand B:	78 90	93 96	81 82	87 85	89	71
Brand C:	80 84	88 85	86 90	85 92	79	80

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