STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI – 86
(For candidates admitted from the academic year 2011-12 & thereafter)

SUBJECT CODE: 11EC/PC/RM24

M. A. DEGREE EXAMINATION, APRIL 2013
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. Explain the procedure for collecting primary data.
2. A candidate is selected for interviews for 3 posts. For the first post, there are 3 candidates, for the second 4 and for the third post there are 2 candidates. What is the probability that the candidate is selected for at least one post ?
3. What is a scatter diagram? How would you use it to measure correlation between two factors ?
4. Explain the steps involved in formulating and testing hypothesis.
5. What are seasonal fluctuations ? How do they help in business decisions ?

SECTION – B

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

6. Discuss the properties of a] Poisson and b] Normal distributions.
7. A] Explain the conditions under which Mann-Whitney U test is conducted.
   B] A chain of departmental stores opened three stores in Mumbai. The management wants to compare the sales of the three stores over a six day long promotional period. The relevant data is given below. Use the Kurskal-Wallis test to compare the equality of mean sales in all the three stores.

Store A	Store B	Store C
16	20	23
17	20	24
21	21	26
18	22	27
19	25	29
29	28	30

8. Fit a second degree parabolic trend for the given data.

Year	2001	2002	2003	2004	2005
Sales	32	17	10	11	20

   [in Rs. Billion]
   Estimate the sales for 2009.

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

1. Prepare a schedule for compiling primary data regarding the consumption habits of landless agricultural labourers and send copies of it to 5 research organizations.

2. Two kind of manure applied to 16 one hectare plots, other conditions remaining the same. The yield in quintals is given below. Applying 't' test examine the significance of the difference between the mean yields due to the application of different kinds of manures.

Manure I :	18	20	36	50	49	36	34	49	41
Manure II :	29	28	26	35	30	44	46		

3. Represent the following data through a scatter graph

Year	Nitrogenous	Phosphatic	Potassic
1970-71	1487	462	228
1971-72	1755	564	304
1972-73	1779	587	333
1973-74	1835	634	314
1974-75	2803	913	611

4.

Year	YY	X1	X4	X2	X3	t
1991	98.6	100.2	87.4	108.5	99.1	1
1992	101.2	101.6	97.6	110.1	99.1	2
1993	102.4	100.5	96.7	110.4	98.9	3
1994	100.9	106.0	98.2	104.3	110.8	4
1995	102.3	108.7	99.8	107.2	108.2	5
1996	101.5	106.7	100.5	105.8	105.6	6
1997	101.6	106.7	103.2	107.8	109.8	7
1998	99.8	105.5	96.6	102.7	100.6	8
1999	100.3	95.6	88.9	104.1	81.0	9
2000	97.6	88.6	75.1	99.2	68.6	10

For the data given above fit a multiple regression equation and interpret the results.

5. Two models of machine are under consideration for purchase. An organistion has one of each type for trial period and a team of 14 operators use each machine for a fixed length of time. The results are given below. Is there any significant difference between the output capacities of the two machines ? Test at 5% level of significance using Wilcoxon Signed Rank Sum test

Operator	a	b	c	d	e	f	g	h	i	j	k	l	m	n
Output from Machine 1	78	75	53	68	82	64	95	86	64	71	54	80	51	70
Machine 2	60	58	46	71	80	59	73	78	37	75	60	79	38	51

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