2025

M.Sc. 1st Semester Examination

ECONOMICS

Paper : ECOC403X9

(Statistical Computing for Economics)

(Practical)

Full Marks : 50 Time : Two Hours

The figures in the margin indicate full marks.
Candidates are required to give their answers in their own words as far as practicable.

Answer any ***five*** questions : 10×5=50

1. (a) Write a C program to check whether a given integer is even or odd.

   (b) Write a C program to compute the mean and variance of a given data series. 4+6 [CO4]

2. Perform one way ANOVA and estimate the Post Hoc test in SPSS for ANOVA using the following data on yield rate and interpret the results.

Fertiliser 1	Fertiliser 2	Fertiliser 3
177.2	176.5	177.1
177.6	176.0	178.1
176.4	177.4	176.9

P.T.O.

Fertiliser 1	Fertiliser 2	Fertiliser 3
177.7	177.4	177.5
177.1	177.4	177.0
176.8	177.0	178.3
176.7	177.4	176.4
177.1	178.0	176.4
176.3	176.4	177.4
178.0	176.9	176.9
176.6	176.0	177.1
177.0	177.0	177.3
177.5	176.4	177.1
176.9	176.1	177.2
176.1	177.1	176.4
176.0	177.2	179.1
176.1	176.6	176.3
178.4	177.2	177.6
177.3	177.1	177.1

10 [CO2]

3. Perform F-test and t-test using the information of Fertiliser 1 and Fertiliser 2 as provided in Question 2 and interpret the results. What can you conclude from the results of F-test and t-test? 6+4 [CO3]

4. (a) Compute descriptive statistics (mean, median, mode, minimum, maximum and standard deviation) for the Yield variable as provided in Question 2.

   (b) Use VLOOKUP to match and retrieve Crop Name and Region Name using the given code.

5+5 [CO1]

5. (a) Create a Pivot Table showing average crop yield by fertilisers as provided in Question 2.

   (b) Generate an appropriate chart based on the Pivot Table and interpret the results. 5+5 [CO1]

6. Using the given data and STATA software, explain the law of demand and estimate the own-price elasticity, cross-price elasticity, and income elasticity of demand for roses.

Demand for roses (Y)	Price of roses (X1)	Price of carnations (X2)	Income of consumers (X3)
11484	2.3	3.5	158
9348	2.5	2.9	173
8429	3.1	4.1	165
10079	2.9	3.6	173
9240	2.7	3.2	179
8862	2.8	3.7	199
6216	3.6	3.8	186
8253	3.2	3.5	189
8038	2.6	3.1	181
7476	2.9	3.2	183
5911	3.8	3.7	182
7950	3.6	3.6	185
6134	2.8	2.9	184
5868	3	3.1	188
3160	4.2	3.6	176
5872	3.7	3.5	188

4+6 [CO4]

P.T.O.

7. What are the steps to be followed using Eviews to carry on Augmented Dickey Fuller Unit Root Test for the GDP series given below? Explain your result.

Year	GDP	Year	GDP
1950	2939.37	1969	6127.87
1951	3025.99	1970	6443.89
1952	3105.44	1971	6549.76
1953	3296.43	1972	6513.52
1954	3455.03	1973	6728.18
1955	3566.84	1974	6807.93
1956	3765.82	1975	7430.85
1957	3750.33	1976	7554.43
1958	4027.49	1977	8102.49
1959	4133.2	1978	8565.34
1960	4360.37	1979	8116.68
1961	4522.7	1980	8663.4
1962	4655.27	1981	9183.74
1963	4934.32	1982	9502.94
1964	5302.07	1983	10195.6
1965	5162.32	1984	10585.15
1966	5159.46	1985	11141.33
1967	5563.24		
1968	5751.72		

7+3 [CO4]

8. Using the following data, discuss the steps involved in estimating equation of Y on X using Eviews software. Interpret the result.

Year	Y	X
1991	1578	82
1992	1317	69
1993	3567	68
1994	3723	52
1995	5580	35
1996	1759	45
1997	1807	29
1998	2859	45
1999	2590	39
2000	2406	55
2001	2537	52
2002	1488	30
2003	1305	56
2004	3455	58
2005	4009	59
2006	5018	32
2007	2894	57
2008	1782	19
2009	2043	79
2010	1851	56
2011	3927	27
2012	2407	32
2013	1856	30
2014	2112	38
2015	2554	18

8+2 [CO2]