2022

M.A. / M.Sc.

4th Semester Examination 2022

ECONOMICS

PAPER—ECO-401

COMPUTER APPLICATION IN ECONOMICS

Full Marks : 50

Time : 2 Hours

The figures in the right-hand margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Illustrate the answers wherever necessary.

Group – A

1. Answer any *two* questions. 2×2

Distinguish between one-way ANOVA and two-way ANOVA. Write down the steps of estimation

of two-way ANOVA in SPSS. What is the importance of Post-Hoc estimation in SPSS for ANOVA? 3+5+2

2. What do you mean by multinomial logit model? Write down the steps of estimation of this model in STATA. State and interpret the summary results of a multinomial logit model. 2+2+6

3. What are the different steps to be followed in using EViews to carry out the Augmented Dickey Fuller test for the GDP series given below?

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

Year	GDP	Year	GDP
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		

4. What are the different steps involved in estimating the regression equation of Y on X using Eviews for the following data? 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

Year	Y	X
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

5. Write programs in FORTRAN or C for the following:

(i) To find out the maximum among three numbers.

(ii) To test whether a given integer is perfect square or not.

(iii) To find out the trace of a matrix

(iv) To find out the A.M. of n numbers

6. Consider the following demand and supply model for commodity X :

Demand : $Q = a_0 + a_1P + a_2PS + a_3Dl + U_1$

Supply : $Q = b_0 + b_1P + b_2PF + U_2$

Where: Q is the quantity of the good traded, P is the market price of the good, PS is the market price of the substitute good, Dl is per capita monthly disposable income of the residents, PF stands for price of the factor of the production. You are given with the following dataset :

	P	Q	PS	DI	PF
1	58	25	25	3	15
2	67	19	24	3	23
3	50	12	16	3	26
4	65	19	23	3	25
5	53	13	15	4	26
6	61	20	26	4	19
7	81	23	23	4	26
8	90	21	27	4	30
9	71	17	24	4	27
10	57	18	20	4	18
11	46	17	26	4	19
12	77	21	24	5	25
13	83	25	27	5	25

	P	Q	PS	DI	PF
14	71	20	23	4	24
15	67	23	20	4	23
16	77	17	24	5	27
17	84	21	29	5	28
18	81	15	19	5	30
19	88	26	28	5	24
20	105	21	28	5	34

(a) Estimate the reduced form equations using both EXCEL and STATA and interpret the results.

(b) Estimate the demand function applying the 2SLS method of estimation using both EXCEL and STATA. Interpret the results.

[Internal assessment – 10]