

Master's Degree Examination - November-2018
III-Semester

Class :II PG
Major : Economics

Time: 3 hours
Max.Marks: 60

17MECC15 Econometrics
Part A

(10 x 1/2 = 5)

Choose the correct answer

- Econometrics model ismodel.
(a) exogenous (b) endogenous
(c) identified (d) either exogenous or endogenous
- The starting point of econometric analysis is
(a) model specification (b) formulation of alternative hypothesis
(c) formulation of null hypothesis (d) collection of data
- Regressor refers to
(a) independent variable (b) dependent variable
(c) error term (d) dummy variable
- In perfect linear model, we assume that regression coefficient remains.....
(a) variable until some point (b) variable through out
(c) constant to some point (d) constant through out
- In an econometric model, $Y = \alpha + \beta X$, α shows,
(a) Intercept of the equation (b) Slope of the equation
(c) Average value of Y for average value of X (d) Rate of change
- Among the following, which is an assumption of OLS?
(a) The explanatory variables are measurable
(b) The relationship being estimated is identified
(c) error term and independent variables are related
(d) error term and independent variables are linearly related
- Profits of a firm depend on the current sales and past period (t-1) sales of the firm this is an example of
(a) Distributed lag model (b) Autoregressive model
(c) Linear programming model (d) Lagged model
- A model with an infinite lag structure was suggested by
(a) Almon (b) Koyck (c) Durbin (d) Spearman's

9. In statistics and econometrics, particularly in regression analysis, a dummy variable is one that takes the value
- (a) 0 or 1 (b) -1 (c) 1 or -1 (d) 1 or 2
10. Cobb Douglas production function is an example of
- (a) linear model (b) double log model
(c) lin log model (d) log lin model

Part B

(5 x 4 = 20)

Answer ALL questions

Each answer should not exceed 200 words or one page

11. a. Describe the scope of Econometrics
(Or)
b. Distinguish between Mathematical Economics and Econometrics
12. a. Describe the desirable properties of an econometric model
(Or)
b. U.S. COFFEE CONSUMPTION (Y) IN RELATION TO AVERAGE REAL RETAIL PRICE (X),* 1970–1980

year	Y	X
1970	2.57	0.77
1971	2.50	0.74
1972	2.35	0.72
1973	2.30	0.73
1974	2.25	0.76
1975	2.20	0.75
1976	2.11	1.08
1977	1.94	1.81
1978	1.97	1.39
1979	2.06	1.20
1980	2.02	1.17

Apply OLS to estimate Regression

13. a. What are the consequences of autocorrelation?
(Or)
b. Explain the Durbin Watson statistic
14. a. What are the reasons for the lag?
(Or)
b. Explain Autoregressive Distributed Lag (ADL) Model
15. a. What is dummy variable trap?
(Or)
b. Explain double-log model

Part C

(5 x 7 = 35)

Answer ALL questions

Each answer should not exceed 600 words or three pages

16. a. Describe the methodology of Econometrics
(Or)
b. Illustrate the goals of econometrics

17.a Explain the OLS assumptions

(Or)

b. Hypothetical data on consumption expenditure y , income x_2 , and wealth x_3

y	X_1	X_2
70	80	810
65	100	1009
90	120	1273
95	140	1425
110	160	1633
115	180	1876
120	200	2052
140	220	2201
155	240	2435
150	260	2686

Estimate the regression equation and summarise the results

18.a What are the sources of Multicollinearity

(Or)

b. Using Spearman's rank correlation method, test for heteroscedasticity for the following

Average annual return (in percentage)	Standard deviation of annual return (in percentage)
12.4	12.1
14.4	21.4
14.6	18.7
16	21.7
11.3	12.5
10.0	10.4
16.2	20.8
10.4	10.2
13.1	16.0
11.3	12

19.a. Describe Koyck distributed lag model

(Or)

b. Discuss stock adjustment model

20. a. Describe the semi log models with own example

(Or)

b. Discuss the reciprocal models