Avinashilingam Institute for Home Science and Higher Education for Women

Coimbatore - 641043

SET-1

Class: B.A. Economics **Time: 2Hrs**
Major: Economics **Max.Marks: 60**

23BECC10 Econometrics – Theory and Practical (SPSS/R/Python)

Course Outcomes:

CO 1 Know the basic concepts in Econometrics

CO 2 Understand the methodology of Econometric Research

CO 3 Comprehend the use of regression analysis for analysing economic data.

CO 4 Familiarize the use of computer software to estimate models and interpret the results.

CO 5 Apply econometric techniques to validate economic theories

Practical **2x20=40**

1. Estimate simple linear regression model for the following data in SPSS/R/Python **CO3:K4**

Variable										
Years of Education (X)	8	10	9	12	14	11	13	7	15	10
Annual Income (Y)	25	30	28	40	45	35	42	22	48	32

1. Estimate multiple linear regression model for the following data in SPSS/R/Python **CO3:K4**

Variable										
Years of Education (X1)	8	10	9	12	14	11	13	7	15	10
Years of Work Experience (X2)	5	7	6	10	12	8	11	4	13	7
Annual Income (Y) in $1000	25	30	28	40	45	35	42	22	48	32

Theory **2x10=20**

1. Discuss various stages in Econometric research? **CO1:K1**

2. What are the steps to compare the regression coefficients of two different regression model? **CO2:K2**

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SET-2

Class: B.A. Economics **Time: 2Hrs**
Major: Economics **Max.Marks: 60**

23BECC10 Econometrics – Theory and Practical (SPSS/R/Python)

Course Outcomes:

CO 1 Know the basic concepts in Econometrics

CO 2 Understand the methodology of Econometric Research

CO 3 Comprehend the use of regression analysis for analysing economic data.

CO 4 Familiarize the use of computer software to estimate models and interpret the results.

CO 5 Apply econometric techniques to validate economic theories

Practical **2x20=40**

1. Estimate simple linear regression model for the following data in

SPSS/R/Python **CO3:K4**

Variable										
Hours Studied (X)	2	4	3	5	6	4	7	3	8	5
Exam Score (Y)	50	65	55	70	75	62	80	58	85	72

2. Estimate multiple linear regression model for the following data in

SPSS/R/Python **CO3:K4**

Variable										
Hours Studied (X1)	2	4	3	5	6	4	7	3	8	5
Hours Slept (X2)	6	7	5	8	7	6	9	5	9	7
Exam Score (Y)	50	65	55	70	75	62	80	58	85	72

Theory **2x20 =40**

1. Discuss various stages in Econometric research? **CO1:K1**

2. What are the steps to compare the regression coefficients of two different regression model? **CO2:K2**

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SET-3

Class: B.A. Economics **Time: 2Hrs**
Major: Economics **Max.Marks: 60**

23BECC10 Econometrics – Theory and Practical (SPSS/R/Python)

Course Outcomes:

CO 1 Know the basic concepts in Econometrics

CO 2 Understand the methodology of Econometric Research

CO 3 Comprehend the use of regression analysis for analysing economic data.

CO 4 Familiarize the use of computer software to estimate models and interpret the results.

CO 5 Apply econometric techniques to validate economic theories

Practical **2x20=40**

1. Estimate simple linear regression model for the following data in

SPSS/R/Python **CO3:K4**

Variable										
Fertilizer Used (X)	10	15	12	18	20	14	22	11	25	17
Crop Yield (Y) in tons	2.5	3.2	2.8	3.6	4.0	3.0	4.3	2.6	4.8	3.5

2. Estimate multiple linear regression model for the following data in SPSS **CO3:K4**

Variable										
Fertilizer Used (X)	10	15	12	18	20	14	22	11	25	17
Crop Yield (Y) in tons	2.5	3.2	2.8	3.6	4.0	3.0	4.3	2.6	4.8	3.5

Theory **2x10 =20**

1. Discuss various stages in Econometric research? **CO1:K1**

2. What are the steps to compare the regression coefficients of two different regression model? **CO1:K1**

3.

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SET-4

Class: B.A. Economics **Time: 2Hrs**
Major: Economics **Max.Marks: 60**

23BECC10 Econometrics – Theory and Practical (SPSS/R/Python)

Course Outcomes:

CO 1 Know the basic concepts in Econometrics

CO 2 Understand the methodology of Econometric Research

CO 3 Comprehend the use of regression analysis for analysing economic data.

CO 4 Familiarize the use of computer software to estimate models and interpret the results.

CO 5 Apply econometric techniques to validate economic theories

Practical **2x20=40**

1. Estimate simple linear regression model for the following data in SPSS/R/Python **CO3:K3**

Variable										
Car Weight (X) in kg	900	1000	1100	950	1200	1150	1300	1050	1250	1400
Fuel Efficiency (Y)	18	17	16	17.5	15	15.5	14	16.5	14.5	13

2. Estimate multiple linear regression model in SPSS/R/Python **CO3:K3**

Variable										
Car Weight (X1) in kg	900	1000	1100	950	1200	1150	1300	1050	1250	1400
Engine Size (X2) in L	1.2	1.4	1.6	1.3	1.8	1.7	2.0	1.5	1.9	2.2
Fuel Efficiency (Y)	18	17	16	17.5	15	15.5	14	16.5	14.5	13

Theory **2x10=20**

1. Discuss various stages in Econometric research? **CO1:K1**
2. What are the steps to compare the regression coefficients of two different regression model? **CO1:K1**

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SET-5

Class: B.A. Economics **Time: 2Hrs**
Major: Economics **Max.Marks: 60**

23BECC10 Econometrics – Theory and Practical (SPSS/R/Python)

Course Outcomes:

CO 1 Know the basic concepts in Econometrics

CO 2 Understand the methodology of Econometric Research

CO 3 Comprehend the use of regression analysis for analysing economic data.

CO 4 Familiarize the use of computer software to estimate models and interpret the results.

CO 5 Apply econometric techniques to validate economic theories

Practical **2x20=40**

1. Estimate simple linear regression model for the following data in SPSS/R/Python **CO3:K3**

Variable										
House Size (X) in sq. m	50	60	55	70	80	65	90	58	85	75
House Price (Y) in $1000s	150	180	165	210	240	195	270	170	255	225

2. Estimate multiple linear regression analysis in SPSS/R/Python **CO3:K3**

Variable										
House Size (X1) in sq. m	50	60	55	70	80	65	90	58	85	75
Distance to City Center (X2) in km	15	12	14	10	8	11	6	13	7	9
House Price (Y) in $1000s	150	180	165	210	240	195	270	170	255	225

Theory **2x10=20**

1. Discuss various stages in Econometric research? **CO1:K1**
2. What are the steps to compare the regression coefficients of two different regression model? **CO1:K1**