

STELLA MARIS COLLEGE (AUTONOMOUS), CHENNAI – 86
(For Candidates admitted during the academic year 2011 – 2012)

SUBJECT CODE: 11EC/ME/EM53

B.A. DEGREE EXAMINATION NOVEMBER 2013
BRANCH IV – ECONOMICS
FIFTH SEMESTER

COURSE : MAJOR – ELECTIVE
PAPER : BASIC ECONOMETRICS
TIME : 3 HOURS

MAX.MARKS: 100

SECTION – A

I. ANSWER ALL QUESTIONS. EACH ANSWER NOT TO EXCEED 50 WORDS.
(10 X 3 = 30)

1. Define Econometrics.
2. What is the principle of least squares?
3. State Gauss-Markov theorem.
4. What does the statement $R^2 = 0.98$ suggest?
5. What is dummy variable?
6. Write a note on the functional forms of regression model.
7. Given the estimated consumption function : $C = 13.1926 + 0.83Y_d$, interpret it.
8. What is the use of multiple regression analysis?
9. What is meant by a simultaneous equation model?
10. Show the simultaneous equations of simple macro economic model.

SECTION – B

II. ANSWER ANY FIVE QUESTIONS, EACH ANSWER NOT TO EXCEED 300 WORDS.
(5 X 6 = 30)

11. What is simultaneous equation bias?
12. Derive the parameters of a simple linear regression model.
13. How would you test the goodness of fit for a simple regression model?
14. Give the following demand –supply model, why is it a simultaneous equation model?
Which are the endogeneous and exogeneous variables?
Demand : $Q_t = \alpha_0 + \alpha_1 P_t + u_{1t}$ $\alpha_1 < 0$
Supply : $Q_t = \beta_0 + \beta_1 P_t + u_{2t}$ $\beta_1 > 0$
15. How would you estimate elasticity using data on price and quantity demanded?
16. Discuss the properties of OLS estimators.
17. Explain how dummy variables are used for analyzing the impact of qualitative variables.

SECTION – C

III. ANSWER ANY TWO QUESTIONS. EACH ANSWER NOT TO EXCEED 1200 WORDS.
(2 X 20 = 40)

18. Elucidate the methodology of Econometrics using a suitable example.
19. Given the data on corn production Y and quantity of fertilizer used X. estimate the production function and the value of R^2

Y :	40	44	46	48	52	58	60	68	74	80
X :	6	10	12	14	16	18	22	24	26	32

20. What are the assumptions of Linear Regression Model?

21. Given the estimated demand function for domestically produced cars:

$$D_x = 1584 - 12P_x - 18P_f + 0.6 Y$$

$$R^2 = 0.88$$

$$\text{S.E. (320)(3) (2) (0.1)}$$

$$n = 30$$

Where D_x = demand for domestic cars

P_x = price of domestic cars

P_f = Price imported cars

Y = disposable income

- a) Interpret and evaluate the function based on economic theory
- b) Test the significance of parameters
