

**PSG COLLEGE OF ARTS & SCIENCE**  
(AUTONOMOUS)  
**BSc DEGREE EXAMINATION MAY 2018**  
(Sixth Semester)

Branch- **STATISTICS**

**ECONOMETRICS**

Time : Three Hours

Maximum : 75 Marks

**SECTION-A (20 Marks)**

Answer **ALL** questions

**ALL** questions carry **EQUAL** marks (10x2 = 20)

- 1 State any two uses of economic models.
- 2 Define dynamic model.
- 3 State any two accelerator principles.
- 4 Write a note on cobweb model.
- 5 Define input output model.
- 6 State any two assumptions of input-output analysis.
- 7 Define econometrics.
- 8 State any two objectives of econometrics.
- 9 What is multi collinearity?
- 10 What are the tests for autocorrelation?

**SECTION - B 125 Marks)**

Answer **ALL** Questions

**ALL** Questions Carry **EQUAL** Marks (5x5 = 25)

- 11 a Explain exogenous and endogenous variables.  
OR  
b Explain linear and non-linear models.
- 12 a State the limitations of Domar's model.  
OR  
b Write a short note on statistic and dynamic multipliers.
- 13 a State the limitations of input-output analysis.  
OR  
b State the assumptions of Leontief s model.
- 14 a What are the limitations of econometrics?  
OR  
b Derive the least square estimators for a and p in the model  $y = a + px + e$  using the random same  $(x_{i\#} y_i) i = 1, 2, \dots .n.$
- 15 a How to remove multi collinearity?  
OR  
b Explain specification error.

**Cont ...**

**SECTION - C (30 Marks)**Answer any **THREE** Questions**ALL** Questions Carry **EQUAL** Marks (3 x 10 = 30)

- 16 Distinguish between (i) Structure and model (ii) Stochastic and non-stochastic models.
- 17 Bring out the similarity between Harrod's and Domar's model.
- 18

N. Purchasing \ sector	Agriculture	Industry	Final demand	Total output
Producing, sector N,				
Agriculture	300	600	100	1000
Industry	400	1200	400	2000

If the final demands were changed to 200 to 800 respectively, find the gross output to meet the new demand.

- 19 Discuss the nature and scope of econometrics.
- 20 What is heteroseadastieity? Show that OLS estimators will not possess minimum variance in the presence of heteroseadasticity.

**Z-Z-Z**

END