**PSG COLLEGE OF ARTS & SCIENCE**
**(AUTONOMOUS)**

**BSc DEGREE EXAMINATION MAY 2017**
**(Sixth Semester)**

**Branch- STATISTICS**

**ECONOMETRICS**

**Time : Three Hours** **Maximum : 75 Marks**

**SECTION-A (20 Marks)**
**Answer ALL questions**
**ALL questions carry EQUAL marks (10 x 2 = 20)**

**1** What is Econometrics?

**2** - Define linear models.

3 What is meant by marginal propensity?

4 What is dynamic multiplier?

**5** Mention any two assumptions of Leontief s Output analysis.

**6** What is meant by open model?

**7** ' Mention any two objectives of Econometrics.

**8** Give any two properties of the least square estimators.

**9** Define Auto correlation. '

**10** Define specification error.

**SECTION - B (25 Marks)**
**Answer ALL Questions**
**ALL Questions Carry EQUAL Marks (5 x 5 = 25)**

**11** a Explain Exogenous and Endogenous variables.

OR

b Explain the uses of economic models.

**12** a Explain static and dynamic multiplier.

. OR

b Explain Harrod economic growth model.

**13** a What are the assumptions made for Leontief s input-output analysis?

OR

b What are open and closed input - output model?

**14** a What are the desirable properties of an econometric model?

OR

b In two variable linear'model, prove that 'b' s a best linear unbiased estimator of p.

**15** a Explain the concept of heteroscedasticity. Give an example.

•OR

b Explain the concept of dummy variables.

**SECTION - C (30 Marks)**

**Answer any THREE Questions**

**ALL Questions Carry EQUAL Marks (3 x 10 = 30)**

**16** **Differentiate between economic model and econometric model.**

**17** **Explain the limitations and leakages of the multiplier.** *

**18** **Explain Leontief s input - output analysis.** -

**19** **The least - square estimate of ociny = a + px + uisa = ]T(j/-xw;)y;**

**where Wj = Xj / Ex; with X; = x; - x and var(a) =** $\epsilon T_U^2 \left[ \frac{1}{n} + \frac{x^2}{\sum_{i=1}^{n} Sxr} \right]$

**Show that no other linear unbiased estimate of a can be constructed with a smaller variance.**

20 **Explain the concept of multicollinearity with example. What are the effects of multicollinearity.**

**Z-Z-Z** **END**