PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)
BSc DEGREE EXAMINATION MAY 2022
(Sixth Semester)

Branch – STATISTICS

ECONOMETRICS

Time: Three Hours   Maximum: 75 Marks

SECTION-A (10 Marks)
Answer **ALL** questions
ALL questions carry **EQUAL** marks   (10 x 1 = 10)

1. The term "random" is synonym for the term
   (i) Stochastic   (ii) Variable
   (iii) Error   (iv) Regression

2. The given function $f(x) = ax^2 + bx + c$, is an example of _____ function.
   (i) Quadratic   (ii) Polynomial
   (iii) Linear   (iv) Rational

3. _____ is a growth model
   (i) A linear trend model   (ii) Lin log model
   (iii) Loglin model   (iv) None of the above

4. Marginal propensity to consume is
   (i) Increase in consumption due to one unit increase in income
   (ii) Total consumption divided by total income
   (iii) Both (a) and (b)
   (iv) Neither (a) nor (b)

5. In input-Output analysis, if the exogenous sectors of the open input model is absorbed in to the system as just another sector as _____
   (i) A transaction matrix   (ii) A technology coefficient
   (iii) Leontief closed model   (iv) All the above

6. The inventer of Input-Output analysis is
   (i) Sir Francies Galton   (ii) Fisher
   (iii) Prof. Wassily W. Leontif   (iv) Arther Cayley

7. Econometrics is a
   (i) Statistical analysis of economic relationship
   (ii) Mathematical analysis of economic relationship
   (iii) Both (a) and (b)
   (iv) None of the above

8. Which is the basic tool of econometrics?
   (i) Simple linear regression   (ii) Multilevel linear regression
   (iii) Multiple linear regressions   (iv) General linear model

9. If there exists high multicollinearity, then the regression coefficients are
   (i) Determinate   (ii) Intermediate
   (iii) Infinite values   (iv) Small negative value

10. This test is a test of both heteroscedasticity and specification error test
    (i) Goldfield-Quandt test   (ii) Breuseh-Pagan-Godfrey test
    (iii) Whites general heteroscedasticity test   (iv) Spearman's rank correlation test

SECTION - B (35 Marks)
Answer ALL Questions
ALL Questions Carry EQUAL Marks (5 x 7 = 35)

11 a Narrate the steps involved in an econometric analysis of economic models.

OR

  b Summarize a) Dynamic and b) Micro models.

12 a Write a note on Static and Dynamic multiplier.

OR

  b Bring out Domar model for economic growth.

13 a Describe Leontief's Input-Output analysis.

OR

  b In an economy there are two industries P_1 and P_2 and the following table gives the supply and the demand position in cores of rupees.

Production Sector	Consumption Sector		Final Demand	Gross Output
	P_1	P_2		
P_1	10	25	15	50
P_2	20	30	10	60

Determine the outputs when the final demand changes to 35 for P_1 and 42 for P_2.

14 a Explain economic and econometric models.

OR

  b Summarize scope and limitations of econometrics.

15 a Elucidate tests for auto-correlation.

OR

  b Outline a) Specification errors and b) Dummy variables.

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

16 Analyze stochastic and non-stochastic models.

17 Elucidate a) Marginal propensity to consume   b) Cobweb model.

18 Discuss the structure of open framework Input-Output model.

19 Analyze two variables linear regression models.

20 Examine the concepts of multicollinearity.

Z-Z-Z   END