PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BCom DEGREE EXAMINATION – DECEMBER 2022
(Third Semester)

Branch – COMMERCE (BUSINESS ANALYTICS)

ECONOMETRICS

Time: Three Hours   Maximum: 50 Marks

SECTION-A (5 Marks)
Answer ALL questions
ALL questions carry EQUAL marks   (5 x 1 = 5)

1   Mean value of the Error term should be
(i) 1
(ii) 0
(iii) -1
(iv) σ^2

2   If generated value of tolerance is equals to 1, it is an indication of
(i)   Low Multicollinearity
(ii) Perfect Multicollinearity
(iii) No Multicollinearity
(iv) High Multicollinearity

3   Panel data also known as
(i) Time series data
(ii) Cross section data
(iii) Both A and B
(iv) Pooled data

4   Input and output analysis consists of
(i)   n industries
(ii)   n+1 industries
(iii) n-1 industries
(iv) N-n industries

5   Durbin Watson test used as
(i) Minimum sample size
(ii) Large sample size
(iii) As per the requirement
(iv) Based on population size

SECTION - B (15 Marks)
Answer ALL Questions
ALL Questions Carry EQUAL Marks   (5 x 3 = 15)

6   a   What are the Objectives and Limitations of Econometric Model?
OR
    b   Briefly explain economic forecasting.

7   a   Define Bivariate Econometric Modelling.
OR
    b   Explain the term Multicollinearity and its uses.

8   a   Explain graphical representation of Heteroscedasticity
OR
    b   Define (i)Panel Data   (ii) Dummy Variables.

9   a   Write down the assumptions of Input and output analysis
OR
    b   Explain the closed input model.

10 a   Explain the features of ARIMA Model
OR
    b   What is auto regression? And explain the methods of diagnosing auto regression.

SECTION -C (30 Marks)
Answer ALL questions
ALL questions carry EQUAL Marks   (5 x 6 = 30)

11 a Brief explain about Method of two variable linear regression model
<div align="center">OR</div>

   b Explain Error term and testing method

12 a Explain multivariate econometric modelling with example
<div align="center">OR</div>

   b Derive the test for deducting Multicollinearity

13 a Explain Interaction and Seasonal data effects using in Dummy variables.
<div align="center">OR</div>

   b Explain Univariate time series modelling

14 a
$$A=\begin{pmatrix} S_1 & S_2 & S_3 \\ 0.2 & 0.3 & 0.2 \\ 0.4 & 0.1 & 0.2 \\ 0.1 & 0.3 & 0.2 \end{pmatrix} \quad F_1=100, F_2=50, F_3=60$$

Find out the output level of each other.
<div align="center">OR</div>

   b Derive Leontief's input/output analysis

15 a Briefly explain auto correlation
<div align="center">OR</div>

   b Explain Box- Jenkins (BJ) model

<div align="center">Z-Z-Z   END</div>