Goa Vidyaprasarak Mandal's

Gopal Govind Poy Raiturcar College of Commerce and Economics,

Farmagudi - Ponda Goa

M.Com. Semester -IV End Examination, April 2025

COM 603: Advanced Econometrics

Duration: 2 Hours Total Marks: 40

Instructions: *1) This paper consists of* ***six*** *questions carrying* ***equal*** *marks.*
2) Question No. ***1*** *consists of* ***5 compulsory*** *questions of* ***2 marks each****.*
3) Answer ***any three*** *questions from Q. No****. 2,3,4,5 and 6.***
4) Each question carries 10 marks.

(Marks) (CO) (BL)

Q.1. Answer the following.

a) What are the uses of the Probit Model? (02) (01) (01)

b) Interpret logit model L_i =ln$\left(\frac{Pi}{1-Pi}\right) = \partial + \beta xi +$ ui. (02) (01) (02)

c) Write the importance of the Johansen Co-integration test. (02) (04) (01)

d) What is the importance of OLS method of regression? (02) (02) (01)

e) What is Multicollinearity in time series data? (02) (02) (02)

Q.2. Given that the p-value obtained from a Granger Causality test is less than 0.05, apply your understanding of hypothesis testing to state the null and alternative hypotheses. Then, explain how Granger Causality works and interpret the results in the context of time series analysis. (10) (01) (03)

Q.3. Explain Multivariate GARCH Model and its types. (10) (03) (02)

Q.4. Explain VAR and GVAR in the context of time series with an example. (10) (02) (03)

Q.5. What is Panel Data? Explain the types of Panel Data. (10) (04) (02)

Q.6. Provide explanations for the following.

a) Fixed Effect Model

b) Random Effect Model (10) (04) (01)