



K24U 0106

Reg. No.:

Name :

Sixth Semester B.A. Degree (C.B.C.S.S.-OBE – Regular/Supplementary/
Improvement) Examination, April 2024
(2019 to 2021 Admissions)

CORE COURSE IN ECONOMICS/DEVELOPMENT ECONOMICS
6B15 ECO/DEV ECO : Basic Econometric Analysis

Time : 3 Hours

Max. Marks : 40

PART – A

Answer **all** questions. **Each** question carries **1** mark.

1. What distinguishes econometrics from purely mathematical economics ?
2. Define econometrics.
3. Explain the meaning of Population Regression Function (PRF).
4. What do you mean by stochastic error term ?
5. Define multicollinearity.
6. Define autocorrelation. (6×1=6)

PART – B

Answer **any six** questions. **Each** question carries **2** marks.

7. Elucidate the scope of econometrics with suitable example.
8. Distinguish between stochastic and non-stochastic relationship.
9. What is meant by level of significance ?
10. Define multiple linear regression.
11. State any two assumptions of ordinary least squares.
12. What are the problems with perfect multicollinearity ?
13. How should we correct for a heteroscedastic error term if the true nature of the heteroscedasticity was known ?
14. What do you mean by non-linear regression models ? (6×2=12)

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PART – C

Answer **any four** questions. **Each** question carries **3** marks.

15. Discuss the nature and type of data collected.
16. Explain the division of econometrics.
17. A researcher estimated the following model.
$$\text{SALARY} = \beta_0 + \beta_1 \text{ EDUCATION} + \beta_2 \text{ EDUCATION}^2 + u_i$$

What type of regression is this ? Is it a linear model ? Does it violate the CLRM assumption of no perfect multicollinearity ?
18. Explain the coefficient of determination.
19. Explain the following tests to detect the existence of heteroscedastic disturbances (a) Glejser test; (b) Goldfeld-Quandt test.
20. What are the consequences of autocorrelation ? (4×3=12)

PART – D

Answer **any two** questions. **Each** question carries **5** marks.

21. Describe the main steps involved in econometric research by giving suitable examples from economic theory.
22. Prove that OLS estimators are BLUE given the assumptions of Classical Linear Regression Model.
23. What are the theoretical and practical consequences of imperfect multicollinearity ? Explain different methods for detecting the presence of high multicollinearity.
24. Explain the procedure of estimating linear demand function. (2×5=10)