

ST. JOSEPH’S UNIVERSITY, BENGALURU -27

B.A–III SEMESTER

SEMESTER EXAMINATION: OCTOBER 2023

**(Examination conducted in November /December 2023)**

ECS 3222 – BASIC ECONOMETRICS

(For current batch students only)

**Time: 2 Hours Max Marks: 60**

**This paper contains TWO printed page and THREE parts**

**PART-A**

1. **Answer any TEN of the following. 3X10=30**
   1. Define Econometrics and mention its significance in economics.
   2. Differentiate between correlation and regression.
   3. What is an error term? What are its objectives?
   4. What are Partial Regression Coefficients? Give an example.
   5. Differentiate between PRF and SRF.
   6. In a regression model with 2 explanatory variables, X and Z how is the interpretation of the coefficient on X different from a model with only X as the explanatory variable?
   7. What are time series and cross sectional data? Give an example.
   8. Differentiate between Null and Alternative Hypothesis.
   9. Define multicollinearity. Give examples.
   10. Distinguish between scaling and units of measurement.
   11. Define partial regression coefficient.
   12. What is Heteroscadasticity? Mention its causes.

**PART-B**

1. **Answer any THREE of the following. 5X3=15**
2. Discuss the basic two-variable regression model and its components.
3. Explain the concept of R2 and adjusted-R2 in multiple regressions and their interpretation.
4. Explain the concept of autocorrelation and its implications in regression analysis.
5. Explain how dummy variable can be a best indicator for seasonal analysis.

**PART-C**

1. **Answer any ONE of the following. 15X1=15**
2. Find the regression equation and R2 from the following. Draw your statistical inferences.

|  |  |
| --- | --- |
| **Inflation (X)**  **(%)** | **Bonds (Y)**  **(%)** |
| 4.4567 | 6 |
| 5.77 | 7 |
| 5.9787 | 8 |
| 7.3317 | 9 |
| 7.3182 | 10 |
| 6.5844 | 11 |
| 7.8182 | 12 |
| 7.8351 | 13 |
| 11.0223 | 14 |
| 10.6738 | 15 |
| 10.8361 | 16 |
| 13.615 | 17 |
| 13.531 | 18 |

1. Explain Multiple Regression Analysis and Outline its assumptions.