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G – 4427

Reg. No. : .....

Name : .....

Second Semester M.A. Degree Examination, July 2019

Branch : Economics

EC 224 – ECONOMETRICS AND RESEARCH METHODOLOGY

(2018 Admission)

Time : 3 Hours

Max. Marks : 75

PART – A

Answer **all** questions in **one** or **two** sentences. **Each** question carries **1** mark.

1. What is linear regression model.
2. Estimate and estimator.
3. Properties of F distribution.
4. Dummy variable trap.
5. Stationarity.
6. Serial correlation.
7. Power of a test.
8. Interaction effect.
9. Quantitative research.
10. Research hypothesis.

(10 × 1 = 10 Marks)

P.T.O.



## PART – B

Answer any **seven** questions. Answer should not exceed **500** words. **Each** question carries **5** marks.

11. What is coefficient of determination? What are its properties?
12. Explain how to test the overall significance of multiple regression in terms of  $R^2$
13. What are the methods of detecting multicollinearity?
14. Why does serial correlation occur in a data set?
15. Distinguish between trend stationary and difference stationary stochastic process.
16. What is piece-wise regression? What is it used for?
17. What are the unit root tests available? Explain.
18. What do you mean by Analysis of Variance?
19. What is research design? What are its features?
20. Briefly explain various methods of collecting primary data

(7 × 5 = 35 Marks)

## PART – C

Answer any **three** questions. Answer should not exceed **1200** words. **Each** question carries **10** marks.

21. State and prove Gauss Markov theorem.
22. State and explain the assumptions behind the method of least squares.
23. Examine the alternative tests for detecting heteroscedasticity.
24. Estimate linear regression model for the income consumption data given in the table below and interpret the parameters.

Consumption Expenditure (in Rs. 000)	12	13	15	17	18	20	20	22	25	28
Monthly income (in Rs. 000)	18	19	22	25	26	28	31	35	36	40

25. What do you mean by research process? Explain.

(3 × 10 = 30 Marks)

