PART – D

(Long essays)

Answer **any two** questions. Answers should **not** exceed **six** pages.

28. Explain the two approaches in the hypothesis testing of regression coefficients.

29. Explain the steps involved in the White's test for heteroscedasticity.

30. Given the following sample data of a two variable regression model.

    $\Sigma X_i = 60$, $\Sigma Y_i = 120$, $\Sigma X_i^2 = 540$, $\Sigma Y_i^2 = 1200$, $\Sigma X_i, Y_i = 620$

    Sample size = 30. Estimate regression equations Y on X and X on Y.

31. Distinguish between distributed lag model and autoreggressive model. What are the problems in Koyck, adaptive expectations and partial adjustment models ?

(2×13=26)

Reg. No. : .....

Name : .....

II Semester M.A. Degree (Supplementary) Examination, March 2018

(2013 and Earlier Admission)

ECONOMICS

Paper – VI : Basic Econometrics

Time : 3 Hours Max. Marks : 80

PART – A

Answer **all** questions (Objective type).

1. _____ method minimizes the residual sum of squares in order to estimate parameters.
   a) Ordinary least squares b) Maximum likelihood
   c) Bayesian d) None of the above

2. _____ is the difference between actual and estimated Y values in a regression.
   a) Intercept b) Slope c) Lag d) Error

3. The probability of not committing a Type II error is called
   a) Level of significance b) Probability value
   c) Size of the test d) Power of the test

4. As sample size increases, the sampling error
   a) Increases b) Decreases
   c) Remains constant d) None

5. OLS regression model must be linear in
   a) Parameters b) Variables
   c) Both d) None
6. _____ measures the goodness of fit of model.
   a) d statistic b) p value
   c) Standard error d) R square
7. Factor analysis is a remedial measure for
   a) Normality
   b) Autocorrelation
   c) Multicollinearity
   d) Heteroscedasticity
8. Dummy variable models can be used for
   a) Categorical variable analysis
   b) Deseasonalization
   c) Structural change
   d) All the above
9. Dropping a variable to solve multicollinearity may lead to
   a) Specification bias b) Autocorrelation
   c) Endogenity d) Simultaneity
10. Spearman's rank correlation test is used to test
    a) Heteroscedasticity
    b) Autocorrelation
    c) Multicollinearity
    d) None of the above **(10×1=10)**

PART – B

Answer **any eight** questions. Answers should **not** exceed **one** and a **half page each**.

11. What is panel data ?
12. What is nominal scale ?
13. Distinguish between Type I and Type II error.
14. Define central limit theorem.
15. What is an efficient estimator ?
16. Define degrees of freedom.
17. What is p value ?
18. Define autocorrelation.
19. Define coefficient of correlation.
20. What is GLS method ?
21. What is dummy variable trap ? **(8×3=24)**

PART – C

(Short essays)

Answer **any four** questions. Answers should **not** exceed **two** and a **half page each**.

22. Distinguish between Econometrics and Mathematical Economics.
23. State and explain Gauss Markow theorem.
24. What is the justification of stochastic disturbance term in regression analysis.
25. Discuss the consequences of OLS estimation in the presence of multicollinearity.
26. Explain ANOVA in regression.
27. Explain Koyck model. **(4×5=20)**