KERALA AGRICULTURAL UNIVERSITY

B.Sc. (Hons.) C & B 2016 Admission

V Semester Final Examination-February-2019

Econ.3106 **Fundamentals of Econometrics (1+1)** **Marks: 50**

Time: 2 hours

I Fill in the blanks (10x1=10)

1 If the coefficient of determination $R^2 = 0.85$ in the model $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + u$, itimplies that the percentage variation in Y that is explained by the independent variables X_1 and X_2 is ---------- per cent.

2 If we reject the null hypothesis when it is true, it is known as ---------- error.

3 A high valueof R^2,with t-ratio not significant for most of the explanatory variables is an indication of ----------

4 A value of ---------- the Durbin-Watson d statistic indicates no autocorrelation.

5 The term regression was introduced by ----------

State True or False

6 The assumption that Variance $(u_i / X_i) = \sigma^2$ implies heteroscedasticity

7 If the null-hypothesized value lies in the confidence interval, the hypothesis is not rejected.

8 The term 'regressor' in regression analysis means the dependent variable.

9 In a two variable regression model, the slope coefficient measures the change in Y which the model predicts for a unit change in X.

10 Set of observations on one or more variables at the same point of time is known as time series data.

II Write short notes on any FIVE of the following (5x2=10)

1 BLUE

2 Autocorrelation.

3 R^2 and adjusted R^2

4 Standard Error of an estimate.

5 Multiple Linear Regression Model.

6 Heteroscedasticity.

7 F test

P T O

III Answer any FIVE of the following (5x4=20)

1 Steps in testing of hypothesis.

2 Methods for the detection of heteroscedasticity,(any two).

3 Explain the significance of the stochastic disturbance term.

4 Remedial measures for autocorrelation with explanation of each of these measures.

5 Methodology of Econometrics.

6 Meaning of linear regression model and need of regression analysis.

7 Relationship of econometrics with related fields. Given the model, Y= a+ bX+ u, give the formula to estimate the parameters a and b.

IV **Write essay on any ONE:** **(1x10=10)**

1 Multicollinearity – Consequences, detection and remedial measures for solving this problem in regression analysis.

2 OLS method in detail along with its assumptions, merits and demerits.

****