Name of the Course : B.A.(H) Economics   Semester: …4..

Name of the Paper : Introductory Econometrics   Faculty Name : Nikita Gupta

Duration : 40 minutes   Maximum Marks: 12

Date of Test : 19.03.2024

Q1 State whether the following are true or false. Give proof.   (3)

In a simple linear regression model, F test of goodness of fit is equal to the square of t statistic of estimated slope coefficient.

Q2 From a sample of 15 observations, we obtain $\sum Y = 1110$ $\sum X = 1800$ $\sum X_i^2 = 32200$ $\sum Y_i^2 = 122100$ $\sum XY_i = 215500$

Write down the estimated regression line.   (3)

a) Q3 For the sales of motor vehicles, the following regression is estimated   (6)

$$S_t = S_0(1 + g)^t$$

where t is time period in years. Average sales is 50 unit

$$lnS_t = 3.6889 + 0.0583\, t$$

b) Find the estimate for instantaneous and compound growth rate.
c) Find elasticity of sales w.r.t. time.
d) Another model is estimated $S_t = 5.6731 + 2.7530\, t$. Interpret the model.
e) Find the elasticity of sales w.r.t. time from part c). Compare the results with part b).

Faculty Signature: Nikita Gupta