DOON UNIVERSITY, DEHRADUN
Semester Final Examination, odd Semester, 2017
School of social science
M.Sc. (Mathmatics) 2nd Sem
Course: MAG-151 Econometric

Time Allowed: 3Hours   *Maximum Marks: 30*

1- test the significance of $\widehat{b1}$ & $\widehat{b2}$ for the model

Yi = b1 + b2X2i+ b3X3i+ Ui by using the following intermediate results

$\sum Yi^2 = 1000 \sum x2^2 = 200 \sum x3^2 = 1000 \sum x3iyi = -100 \sum x2x3 = 400$ avg (X2) = 15 avg(Y)= 10 n=28 Calculate adjusted R^2.   10 marks

OR

    (a) Derive the formula of R^2 for multivariate regression.   5 marks
    (b) What is the difference between R^2 and adjusted R^2.   5 marks

2- How to formulate (t test) for testing of estimators of sampling distribution .   5 marks

OR

Discuss the confidence interval of estimators ($\widehat{b0}$ & $\widehat{b1}$) for any sampling distribution.   5 marks

3- Generalize the estimators of multiple regression model (with two variable Example) and discuss the characteristics of estimators.   10 marks

OR

With the following table   10 marks

Quantity	8	3	4	7	8	0
Demand	2	4	3	1	3	5

    1- Estimate the demand function of the product Y= b0 + b1X + U.
    2- Estimate the average price elasticity of demand.

4- What is chow test? Explain the chow test with the suitable steps.   5 marks

OR

Following consumption function were estimated from the data   5 marks

$\widehat{C1} = 170 + .90Yd$, n1=35, $R1^2 = .92$, $\sum e1^2 = 3251$ S.E.= (b1:5.6)

$\widehat{C2} = 160 + .82Yd$, n1=30, $R1^2 = .95$, $\sum e2^2 = 4532$ S.E.= (b1:nil)

$\widehat{Cp} = 250 + .70Yd$, n1=35+ 30, $R1^2 = .92$, $\sum ep^2 = 16320$ S.E.= (b1:6.02)