**BIII (Linear Model) 2018-19 Assignment 3 (Due date November 19, 2018)**

(NO LATE ASSIGMENT WILL BE ACCEPTED)

(SHOW R CODE FOR EACH STEP OF THE FOLLOWING PROBLEMS)

1. Consider problem 1 of your Assignment 1. For each program, you delete two observations and thus it is a balanced one way model.

Let the effect of Program i be denoted by αi . Let the set S1 denote the collection of elementary contrasts of the form αi - αj,  I < j. Let S2 denote the collection of general contrasts of the form α1 -2α2 +α3 and 2α1 -α3 -α4 . Let S3 be the union of S2 and S1. Compute simultaneous confidence intervals with 95% confidence coefficient for S1  with Scheffe, Tukey and Bonferroni’s method. For S2  and S3 obtain simultaneous confidence intervals using Scheffe’s method as well as Bonferroni’s method. For each of these three sets , which procedure works out best?