MATH 204 - ASSIGNMENT 2

Please Hand in Assignment no later than the Lecture on Friday 13th March.

The data set **Strength.sav** contains information on patients in an experimental study of quadricep muscle strength. The variables in the data set are

- **Patient**: Subject ID number
- **Age**: Age of Patient (in years)
- **Group**: Patient subgroup
  - Group 1: Healthy Controls
  - Group 2: Early stage disease sufferers
  - Group 3: Late stage disease sufferers
- **Test**: Testosterone level (ng/100ml)
- **AgeGroup**:
  - 1: Patient 40 years or under
  - 2: Patient is over 40 years
- **Strength**: Quadricep Strength

The data may be downloaded in SPSS format from

http://www.math.mcgill.ca/∼dstephens/204/Data/Strength.sav

By using multiple regression analysis and General Linear Modelling, find a model that explains the variation in the response variable, **Strength**, adequately. For your chosen model, report parameter estimates for the coefficients of variables in the model, verify the quality of the fit.

You do not have to perform model selection using the F-test.

20 Marks

Please limit your answer to SIX sides. You may use SPSS, and submit extracts from the output generated, provided that you write comments pointing out the key results.