

## STAT 530 - Bayesian Analysis (Term 2, 2009-10)

### ASSIGNMENT 2

**NOTE:** More questions will be added as we cover material. Due Thursday April 1.

1. [Mar. 4] Text, Exercise 7.5. In part (c) you may use the semi-conjugate prior if you prefer. (Also, if you are adapting Hoff's code to do this problem, I'll relate my experience with it in preparing the examples for the March 3rd lecture. For reasons I don't fully understand, in the `y.mis` update I had to replace `Y.full[i,a]` with `Y.full[i,][a]`, in order for the code to execute. To my mind these are equivalent in R, but there may be peculiarities in going from Unix to Windows platforms???)
2. [Mar. 7] Text, Exercise 8.1. (Note the typos:  $\theta_i$  should be  $\theta_j$ .)
3. [Mar. 16] Text, Exercise 9.2.
4. [Mar. 22] Text, Exercise 10.2. In doing this question try and compare two different MH proposals: (i), using a 'random walk,' and (ii), using a normal distribution centred at the MLE with a variance based on the second derivative of the log-likelihood. (In R, `summary(ft)$cov.scaled` may be useful, where `ft` is the fitted model output from `glm()`.)

No further questions.

*Last update Mar. 22, 2010.*