Name: _____ ETC2420/ETC5242 - Quiz 06/10/2016

1. A and B are two events with $P(B) > 0$. Using the definition of conditional probability, what is the condition on events A and B to obtain $P(A|B) = P(A)$?

2. The posterior distribution is given by $\pi(\theta|x) = \frac{f(x|\theta)\pi(\theta)}{f(x)}$. Writing $\pi(\theta|x) \propto f(x|\theta)\pi(\theta)$ means we can ignore the constant $f(x)$ to compute the posterior distribution. YES or NO.

3. By increasing the number of observations, we increase the effect of the prior distribution $\pi(\theta)$ on the posterior distribution $\pi(\theta|x)$. YES or NO.

4. If we use an "uninformative" prior, then the MLE estimate is always equivalent to the posterior mean. YES or NO.

5. The Beta distribution is a conjugate prior for the Bernoulli likelihood. YES or NO.

6. The posterior mean can be computed using Monte Carlo methods. YES or NO.