**Final Exam Question 3**

Consider the following data representing survival times of a random sample of 20 electrical components:

$$51, 3, 17, 13, 5, 4, 17, 1, 5, 3, 8, 22, 1, 1, 13, 8, 15, 3, 1, 13$$

Suppose that you cannot decide which model to use and are considering the possibility that the data could be either Gamma Distributed, or Weibull Distributed, or log-Normal Distributed.

(a) Use DIC to decide which model is preferable.

(b) For the preferred model, calculate the 95% credible interval for the mean survival time.

(c) For the preferred model, calculate the 95% credible interval for the survival time of the next component to be tested.