Longitudinal Structural Equation Modeling by Todd D. Little
Chapter 13 Reading Questions

1. Plausible values that are characterized by a probability distribution and defined by respective parameters in the initial phase of estimation are referred to as ___.
   A. Indicators
   B. Priors
   C. Covariates
   D. Bays estimators

2. Bayesian modeling is most commonly estimated by what process?
   A. Generalized Least Squares
   B. Robust Maximum Likelihood Estimation
   C. Monte Carlo
   D. Bootstrapping

3. Bayesian statistical inference focuses on parameter estimates and are made in the form of probability statements. Because of this, uncertainty is defined through ____.
   A. Probability distributions
   B. Log-Normal distributions
   C. Multinominal distributions
   D. Discrete distributions

4. What is one key difference between Bayesian models and frequentist models?
   A. Bayesian models use the p-values to make decisions about hypothesis testing.
   B. Frequentist models focus on probability distributions.
   C. Bayesian models assume parameters are fixed in the population.
   D. **Frequentist models assume parameters are fixed in the population**.

5. In the Bayesian framework, the null hypothesis __.
   A. is either rejected or fail to reject using the p-value.
   B. does not have a special place in its inference.
   C. is the central research question.
   D. None of the above

6. The most common critique of the Bayesian framework is that it is ___.
   A. Unreliant on prior knowledge
   B. Context-free
   C. Too restrictive
   D. Subjective

7. What sampler allows estimations to start at random points of the parameter space, defined as random numbers based on the priors of the model?
   A. Metropolis-Hastings Algorithm

B. Hamiltonian No-U-Turn Sampler
C. Gibbs Sampler
D. Slice Sampler

8. For the sake of efficiency, what estimation sampler is recommended?
   A. Metropolis-Hastings Algorithm
   B. Hamiltonian No-U-Turn Sampler
   C. Gibbs Sampler
   D. Slice Sampler

9. Which is not a characteristic for the measure of uncertainty:
   A. It should be continuous in scaling.
   B. It should increase as the number of observations increases.
   C. It should decrease as the number of observations increase.
   D. It should be additive.

10. Better out-of-sample predictive accuracy or better model fit can be indicated by __.
    A. Lower DIC
    B. Lower BIC
    C. Higher DIC
    D. Higher BIC