Multiple Choice Questions

Chapter 7: Data Collection and Analysis

1. Data that are required for developing the computer model are referred to as:

    a. Contextual data
    b. Data for model realisation
    c. Validation data
    d. Experimental data

2. Category C data refer to:
    a. Data that are available
    b. Data that are not available, but collectable
    c. Data are that not available and not collectable
    d. None of the above

3. A good way to deal with data that are not available is to:

    a. Guess their values and hope the results are correct
    b. Estimate their values from similar systems
    c. Estimate their values and perform a sensitivity analysis
    d. Wait until the data become available

4. A key issue in obtaining data is:

    a. Ensuring the sample size is sufficient
    b. Ensuring the data are in the right format
    c. Inspecting the data to check for any inconsistencies
    d. All of the above

5. The preferred distribution for modelling customer arrivals is:

    a. Negative exponential
    b. Log-normal
    c. Weibull
    d. Normal

6. The preferred distribution for modelling activity times is:

    a. Negative exponential
    b. Log-normal
    c. Erlang
    d. Normal

7. The preferred distribution for modelling time between failures is:

   a. Log-normal
   b. Erlang
   c. Normal
   d. Weibull

8. The preferred distribution for modelling repair time is:

   a. Log-normal
   b. Normal
   c. Weibull
   d. Negative exponential

9. In general, statistical distributions are preferred to traces or empirical distributions because:

   a. They make the best use of the random numbers
   b. They are an attempt to represent the underlying population distribution
   c. They give a high probability of the modal value being sampled
   d. They often have long tails

10. Which of the following statistical tests can be used to help determine the fit of a statistical distribution?

   a. Chi-square
   b. Kolmogorov-Smirnov
   c. Anderson-Darling
   d. All of the above