# Quiz 4 302 Study Guide as of 12/1/17

True/false, Multiple-choice, and fill-in-the blanks questions.

**1.** Simulations models are always designed to arrive at a single, exact numerical answer to a given problem.

**2.** The Ritz Carlton organization is a perfect example of a "command and control" managerial style.

**3.** A forecast is usually classified by the future time horizon that it **covers.** Which ones?

**4.** The psychology of waiting is as important as the mathematics of waiting lines.

**5.** Which of the following statements regarding simulation is true?

**6.** The notation M/M/1 describes a single channel model with Poisson arrivals and exponential service times.

**7.** Associative forecasting models consider several variables that are related to the variable being predicted.

**8.** Exponential smoothing is a time-series forecasting method that fits a trend line to a series of historical data points and then extrapolates the line into the future.

**9.** A multiple-serve system exists whenever there are two or more servers working independently inside the system.

**10:** Customers who leave a queue are "balking."

**11.** One reason for using simulations rather than analytical models in solving inventory problems is that the simulations can handle probabilistic demand and inventory replenishment lead times.

**12**. Customers who refuse to join a queue are "balking".

**13.** Quantitative forecasting techniques include.

**14.** The objective of a human resource strategy is to.

**15.** Managers must balance the costs of capacity and service costs and the costs incurred by waiting customers.

**16.** Which of the following forecasting methods are used in planning future operations.

**17.** The main characteristics of waiting lines are.

**18.** Which of these are a part of the Kendall Notation?

**19.** Simulations should not be used before important decisions are to be made.

**20.** The forecaster's job is to find the best statistical relationship between the dependent variable and the independent variables.

**21.** The Hard Rock Cafe is an example of organization that hires the best qualified not the best available.

**22.** The operating characteristics of the system measure the arrival rate.

**23.** Type your answer: The _____method is a simulation technique that uses random numbers as input. (Use two words).

**24.** Type your answer: _____model of HR management does not differentiate between human output and machine output. Choose one: Michigan, Harvard, Foxconn, Haggen Dazs.

**25.** The most common discipline of waiting lines is:_____.

**26.** The linear regression analysis result in a straight-line mathematical model that describes a causal relationship between two dependent variables.

**27.** Which of these are the main advantages of simulations.

**28.** Qualitative forecasting techniques include.

**29.** Even highly skilled workers can be replaced by technology. For example, accountants can be replaced by programs based on artificial intelligence. One's flexibility, adaptability, and willingness to learn is the key to future employment.

**30.** Type your answer: _____model fits better in a service company. Choose one: Michigan, Harvard, Subway Sandwich Shop, or none.

**31.** Mr. Erlang is best known for his design of Disney's "Fast Track" queue management model.

**32.** The simulation is a descriptive technique that enables decision makers to evaluate the behavior of operating models under various conditions.

**33.** Mean Absolute Deviation and Mean Squared Error are measures of standard deviations.

**34.** Large scale simulations require a significant computing power as well as a high level of mathematical competence.

**35.** The forecast is only an estimate of the actual demand.

**36.** The coefficient of correlation measures the strength of the causation between two variables.

**37.** Simulations do not produce optimum solutions.

**38.** The three parts to a queuing system are: the arrival, the queue, and the service.

**39.** Simulations always require a very complex computer system.

**40.** Forecasting techniques assume that the same underlying causation that existed in the past will continue to exist in the future.