True-False Questions: Week 2

1. True-False (±32 points)

To discourage guessing, each correct answer is rewarded with one point, each incorrect answer is penalized with one point, and a question left unanswered is neither rewarded nor penalized. For example, if you answer seven questions out of ten correctly and answer three questions wrong, then your final score will be four. On the other hand, if you had answered only the six questions of which you were sure and left the remaining four questions blank, then your final score would have been six. This policy makes the expected reward for guessing equal to zero.

The questions in each paragraph are always related to the same topic and any assumptions remain valid in this paragraph unless otherwise stated. Questions in different paragraphs have no relationship with each other and assumptions do not remain valid from one paragraph to the next.

An analog model is a replication of the real world system under investigation but generally at a smaller scale, (T/F)_____(1).

A significant cost associated with modeling is the cost to collect and validate data, (T/F)_____(2).

Simulation-based design allows for a very accurate representation of the logistics systems, (T/F)_____(3).

Digital simulation is a prominent descriptive and stochastic modeling tool for the design of logistics systems, (T/F)_____(4).

Strategic logistics planning is based on accurate transactional data, (T/F)_____(5).

Algorithms with exponentially growing running times are preferred over algorithms with polynomially growing running times for large problem instances, (T/F)_____(6).

Logistics is not concerned with the storage, handling and control of materials after they reach the final consumer, (T/F)_____(7).

The advent of JIT, mature highly competitive economies and transportation deregulation has made logistics more challenging in modern times, (T/F)_____(8).

Physical distribution and materials management are independent functions of a business logistics system, (T/F) _____(9).

Minimizing the total cost is the appropriate objective for all logistics systems design projects, (TF) _____(10).

One of the main advantages of modeling logistics systems is the determination of logistics cost and parameters, (TF) _____(11).

Alternative selecting algorithms are particularly useful in situations with complex constraints, (TF) _____(12).

Logistics is one of the main and unifying activities in a corporation that manufacturers consumer goods, (T/F) _____(13).

An adjustment factor of 1.2 is a good factor with one significant digit after the decimal point to approximate the relation between over the road distances in a developed network compared to Euclidean distances, (TF) _____(14).

The costs to remove the old gasoline storage tanks and to remove all site pollution belong to the class of fixed costs when configuring the number and location of gas stations after two oil companies have merged, (T/F) _____(15).

Historical benchmark validation is the model validation technique where individual components of the model are selected and validated to ensure the validity of the complete model, (T/F) _____(16).

A model is stochastic if at least one of the input parameters is not known with certainty, (T/F) _____(17).

In order to compute the great circle norm between two cities one must know the radius of the earth, (T/F) _____(18).

Dual algorithms are often used to compute bounds on heuristic solution values, (T/F) _____(19).

Dual algorithms are often used to compute the solution value of initial feasible solutions, (T/F) _____(20).

Classical expert system algorithms are often used to assist during the design of strategic logistics systems, (T/F) _____(21).

The United States Census collects a variety of data useful for designing logistics systems in the United States, (T/F) _____(22).

Geocoding refers to the process of converting alphanumeric data into geographical or location coordinates, (T/F) _____(23).

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