

Question 1

All the nodes must be connected in which of the following techniques?

- A) minimal-flow
- B) maximal-spanning tree
- C) shortest-route
- D) maximal-flow
- E) minimal-spanning tree

Answer: <https://biology-forums.com/index.php?topic=841193>

Question 2

An air conditioning and heating repair firm conducted a study to determine if the average outside temperature could be used to predict the cost of an electric bill for a home during the winter months in Richmond, VA. It was determined that a quadratic model could be used and the following prediction equation was established:

$$Y = \$1557.76 - 55.05X_1 + 0.56X_2$$

where Y = monthly cost, X₁ = average temperature, and X₂ = average temperature²

- (a) If December has an average temperature of 43 degrees, what is the forecasted monthly electric bill?
- (b) If January has an average temperature of 40 degrees, what is the forecasted monthly electric bill?

Answer: <https://biology-forums.com/index.php?topic=840666>

Question 3

Management resources that need control include machinery usage, labor volume, money spent, time used, warehouse space used, and material usage.

True or False?

Answer: <https://biology-forums.com/index.php?topic=840929>

Question 4

What makes the difference between good decisions and bad decisions?

- A) A good decision is based on logic.
- B) A good decision considers all available data.
- C) A good decision considers all alternatives.
- D) A good decision applies quantitative approaches.
- E) All of the above

Answer: <https://biology-forums.com/index.php?topic=840468>

Question 5

If there are seven less-than-or-equal constraints in a problem, the simplex table contains seven slack variables.

True or False?

Answer: <https://biology-forums.com/index.php?topic=842373>

Question 6

A local computer store is running a sale on the first 99 flat panel monitors sold. There is an equally likely chance of 0-99 units being sold. Each monitor cost \$250, and profit is \$10 per monitor sold. That is, profit equals $-\$250 + \$10X$, where X = the number of monitors sold. The mean amount you would expect to sell is 49.5 units.

- (a) Calculate the expected profit.
- (b) Simulate the sale of 10 items, using the following double digit random numbers: 47, 77, 98, 11, 02, 18, 31, 20, 32, 90.
- (c) Calculate the average profit in (b) above, and compare with the results of (a) above.

Answer: <https://biology-forums.com/index.php?topic=841695>

Question 7

In 1984, who developed an alternative to the simplex algorithm, which often takes significantly less computer time to solve very large-scale LP problems?

- A) Carmichael
- B) Kruskev
- C) Karmarkar
- D) Krakov
- E) Carpenter

Answer: <https://biology-forums.com/index.php?topic=842391>

Question 8

Which of the following statements is FALSE regarding control charts?

- A) X-bar charts measure central tendency in a process.
- B) R-charts measure the variability of a process.
- C) It is not possible to have a LCL below 0 in a c-chart.
- D) It is not possible to have a UCL value above 1 in a p-chart.
- E) The nominal line is always the midpoint between the UCL and LCL.

Answer: <https://biology-forums.com/index.php?topic=841907>

Question 9

Assume that you have an urn containing 10 balls of the following description:
4 are white (W) and lettered (L)
2 are white (W) and numbered (N)
3 are yellow (Y) and lettered (L)
1 is yellow (Y) and numbered (N)
If you draw a numbered ball (N), the probability that this ball is white (W) is 0.60.
True or False?

Answer: <https://biology-forums.com/index.php?topic=840299>

Question 10

Transportation models may be used when a firm is trying to decide where to locate a new facility.
True or False?

Answer: <https://biology-forums.com/index.php?topic=841147>

Question 11

Describe the production mix linear programming application.

Answer: <https://biology-forums.com/index.php?topic=841138>

Question 12

In the multifactor evaluation process, we always select the alternative that has the highest total weighted evaluation.
True or False?

Answer: <https://biology-forums.com/index.php?topic=841987>

Question 13

When a process is out of control, _____ variations exist in the process.

Answer: <https://biology-forums.com/index.php?topic=841956>

Question 14

The concept of inventory is applicable to both manufacturing and service organizations.
True or False?

Answer: <https://biology-forums.com/index.php?topic=840811>

Question 15

According to Table 13-5, which presents a summary of the Monte Carlo output from a simulation of 200 runs, there are 5 possible values for the variable of concern. If this variable represents the number of machine breakdowns during a day, what is the probability that the number of breakdowns is more than 4?

- A) 0
- B) 0.08
- C) 0.09
- D) 1.00
- E) None of the above

Answer: <https://biology-forums.com/index.php?topic=841675>

Question 16

According to Table 8-6, which describes a labor planning problem and its solution, how many workers would actually be on duty during shift 1?

- A) 12
- B) 13
- C) 0

D) 29

E) None of the above

Answer: <https://biology-forums.com/index.php?topic=841098>

Question 17

The optimistic time is the greatest amount of time that could be required to complete an activity.

True or False?

Answer: <https://biology-forums.com/index.php?topic=841347>

BIOLOGY-FORUMS.COM