

Student: _____

Important directions. Show your work and explain your answers for possible partial credit. You make mark one question "Free." You get full credit for your chosen free question regardless of whether you answer it or not.

1. "Must have", "expected" and "excitement" characteristics are categories in the _____ model.

- A. Bi-polar
- B. Kano
- C. Pareto
- D. Quality
- E. Service Matrix

2. A formal way to document customer requirements is:

- A. consumer surveys
- B. quality function deployment (QFD)
- C. focus groups
- D. Delphi technique
- E. sales/marketing matrix

The following table is used for the next few questions. As a manager you are trying to pick from three alternatives, A, B, and C with the objective of obtaining the best profit. The entries within the table list the expected profit for the alternatives under four different future states of nature.

Alternative	State of Nature			
	#1	#2	#3	#4
A	1	0	1	6
B	1	5	4	2
C	3	2	2	3

MAX / MIN | MAX / MIN

②

CHOOSE C

3. If you are uncertain which state of nature will occur, and use the maximin criterion, which alternative will you select?

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4. If you are uncertain which state of nature will occur, and use the maximax criterion, which alternative will you select?

5. If you feel that $P(\#1) = .4$, $P(\#2) = .3$, $P(\#3) = .2$, and $P(\#4) = .1$, which alternative will you select?

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6. If you are uncertain which state of nature will occur, and use the minimax regret criterion, which alternative will you select?

7. The term sub-optimization is best described as the:

- A. result of individual departments making the best decisions for their own areas
- B. limitations on decision-making caused by costs and time
- C. result of failure to adhere to the steps in the decision process
- D. result of ignoring symptoms of the problem
- E. none of the above

8. Testing how a problem solution reacts to changes in one or more of the model parameters is called:

- A. simulation
- B. sensitivity analysis
- C. priority recognition
- D. analysis of variance
- E. decision analysis

9. In the sample linear programming problem describe in Example 6S-2, beginning on p282, what are the decision variables?

10. The difference between expected payoff under certainty and expected payoff under risk is the expected:

- A. monetary value
- B. value of perfect information
- C. net present value
- D. rate of return
- E. profit

11. The term "iso-profit" line means that all points on the line will yield the same profit.

True False

12. The region which satisfies all of the constraints in graphical linear programming is called the:

- A. optimum solution space
- B. region of optimality
- C. lower left hand quadrant
- D. region of non-negativity
- E. feasible solution space

13. Which objective function has the same slope as this one: $4x + 2y = 20$?

- A. $4x + 2y = 10$
- B. $2x + 4y = 20$
- C. $2x - 4y = 20$
- D. $4x - 2y = 20$
- E. $8x + 8y = 20$

14. Choose one transformation listed in Table 1.1 and describe the value-added for during that process.

15. Refer to Figure 4.4:

If the firm decided to work on the technical requirement of "Roll Roundness" what customer requirements would be impacted?

According to the diagram, with what other technical requirement will "Roll Roundness" have a negative correlation?