MONASH
University

FIT3158 Business decision modelling - S2 2022

Started on	Friday, 23 September 2022, 10:21 AM
State	Finished
Completed on	Friday, 23 September 2022, 10:34 AM
Time taken	13 mins 24 secs
Grade	**0.70** out of 1.00 (**70**%)

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Question 1

Correct

Mark 0.10 out of 0.10

Every non-probabilistic method has a weakness for decision making. Which of the following is incorrect regarding a method and its weakness?

- a.   The maximin method ignores potentially large payoffs.
- b.   The maximax method ignores potentially large losses.
- c.   The minimax regret method can lead to inconsistent decisions.
- ◉ d.   All the statements are correct.   ✔

The correct answer is: All the statements are correct.

Question 2

Correct

Mark 0.10 out of 0.10

Decision analysis supports all but one of the following goals. Which goal is not supported?

- ◉ a.   Help ensure selection of good outcomes.   ✔
- b.   Analyse decision problems logically.
- c.   Incorporate problem uncertainty.
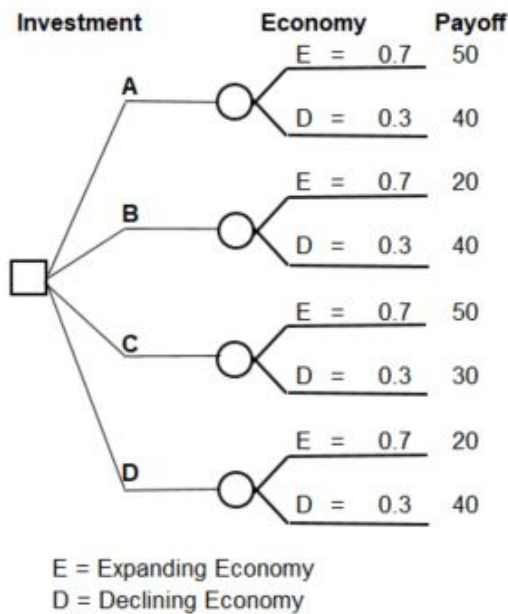- d.   Help make good decisions.

The correct answer is: Help ensure selection of good outcomes.

Question 3

Incorrect

Mark 0.00 out of 0.15

An investor is considering 4 investments, A, B, C, D. The payoff from each investment is a function of the economic climate over the next 2 years. The economy can expand or decline. The following decision tree has been developed for the problem. The investor has estimated the probability of a declining economy at 30% and an expanding economy at 70%. What is the expected monetary value for the investor's problem?

Investment	Economy		Payoff
A	E =	0.7	50
	D =	0.3	40
B	E =	0.7	20
	D =	0.3	40
C	E =	0.7	50
	D =	0.3	30
D	E =	0.7	20
	D =	0.3	40

E = Expanding Economy
D = Declining Economy

- a. 53
- b. 36   ✖
- c. 47
- d. 42

The correct answer is: 47

Question **4**

Incorrect

Mark 0.00 out of 0.15

An investor is considering 4 investments, A, B, C and leaving his money in the bank. The payoff from each investment is a function of the economic climate over the next 2 years. The economy can expand or decline. The following payoff matrix has been developed for the decision problem. The investor has estimated the probability of a declining economy at 40% and an expanding economy at 60%. . What decision should be made according to the expected monetary value decision rule?

Payoff Matrix		
Probability	0.4	0.6
	Economy	
Investment	Decline	Expand
A	20	90
B	30	80
C	-10	100
Bank	40	50

- a. B   ✖

○ b.   A

○ c.   Bank

○ d.   C

The correct answer is: A

Question 5

Correct

Mark 0.10 out of 0.10

The decision rule which determines the maximum payoff for each alternative and then selects the alternative associated with the largest payoff is the _____

○ a.   minimin decision rule.

○ b.   minimax regret decision rule.

◉ c.   maximax decision rule.   ✔

○ d.   maximin decision rule.

The correct answer is: maximax decision rule.

Question 6

Correct

Mark 0.10 out of 0.10

A square node in a decision tree is called a _____node.

○ a.   random

○ b.   chance

○ c.   event

◉ d.   decision   ✔

The correct answer is: decision

Question 7

Correct

Mark 0.10 out of 0.10

Which of the following is a goal of decision analysis?

○ a.   Avoiding decisions leading to bad outcomes.

○ b.   Reduce the role of luck in a decision.

○ c.   Ensure decisions lead to good outcomes.

◉ d.   Help individuals make good decisions.   ✔

The correct answer is: Help individuals make good decisions.

Question 8

Correct

Mark 0.10 out of 0.10

The _____ in a decision problem represent factors that are important to the decision maker.

- ○ a. criteria ✔
- ○ b. payoffs
- ○ c. states of nature
- ○ d. alternatives

The correct answer is: criteria

Question 9

Correct

Mark 0.10 out of 0.10

The _____correspond to future events that are not under the control of the decision maker.

- ○ a. criteria
- ○ b. alternatives
- ○ c. states of nature ✔
- ○ d. payoffs

The correct answer is: states of nature

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