FINAL (CHAPTERS 11–13) ECO 61 FALL 2008 UDAYAN ROY

Each correct answer is worth 1 point, unless otherwise indicated. The maximum score is 30 points. Do not look at anyone else's answers and do not let anyone else see your answers. Please ask the teacher if you do not understand a question. You have 100 minutes. Good luck!

Chapter 11

1. A person is risk averse if
A. His consumption bundle lies at the tangency of the indifference curve and the constant expected consumption line
B. He views variability as a bad thing
C. For a given level of expected consumption, he prefers the risk less bundle to the risky one
D. All of the above

2. Suppose there are two states of nature: *sunny* and *stormy*. Maria's initial consumption bundle is *A* in the accompanying diagram. The expected consumption at bundle *A* is _100___ units of food.


3. The standard deviation of consumption at bundle *A* is _zero__ units of food.

4. Given that the expected consumption of food is the *same* at bundles *A*, *D*, and *E*, one can deduce that the probability of stormy weather is _____. Therefore, the probability of sunny weather is _____.

    a. ½; ½
    b. 1/3; 2/3
    c. ¼; ¾
    d. None of the above. Provide the correct answers: _____; _____.

5. Maria is offered the opportunity of investing in a sunscreen concession at a popular beach. If she makes this investment she will end up at consumption bundle *B*; that is, she will consume a lot of food if the weather is sunny but only a small amount if the weather is stormy and nobody comes to the beach. According to the accompanying figure, which represents Maria's decision problem, will Maria invest in this business venture?

    a. Yes
    b. No
    c. Maria is indifferent between investing in the business and ignoring the opportunity
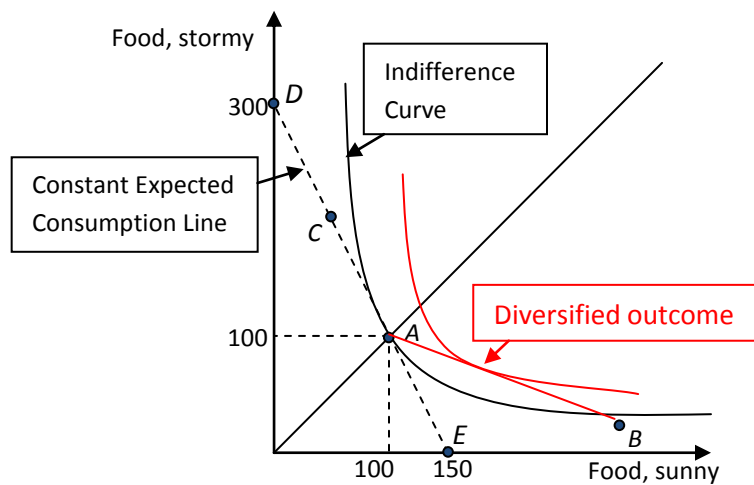
    d. It depends on whether Maria is risk averse or not

6. If Maria can be a part owner of the business along with other partners, would she participate?

A: No, she would stay at bundle *A*. Explain why _____

B: Yes. Shown in red; see diagram.

C: Maria is indifferent between investing in the business and ignoring the opportunity

D: It depends on whether Maria is risk averse or not

7. Suppose there are two states of nature: *sunny* and *stormy*. The probability of sunny weather is Π = 2/3 and, therefore, the probability of stormy weather is 1 − Π = 1/3. When she has no insurance, Alice's consumption bundle is *A*; that is, without insurance, she will consume 400 units of food if the weather is sunny and only 100 units of food if the weather is stormy. The *certainty equivalent* of bundle *A* is _____ units of food.
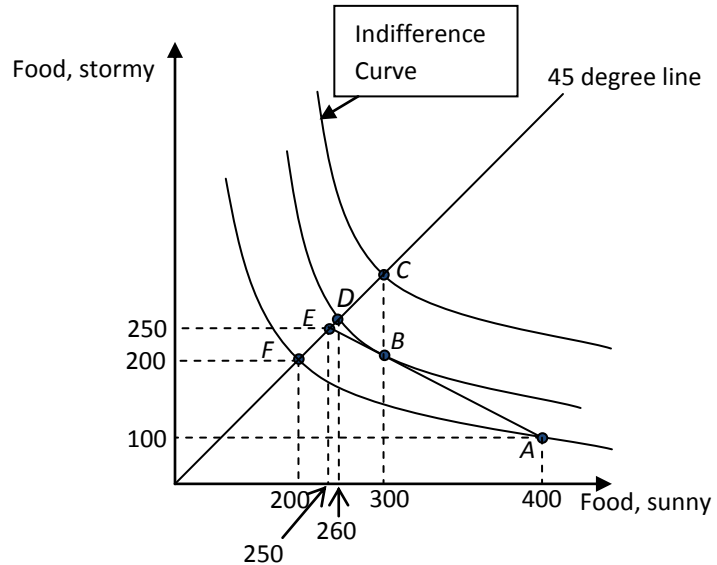
    a. **200**
    b. 250
    c. 260
    d. 300
    e. Other, specify _____

8. An insurance company offers to pay Alice three (3) units of food in storm insurance benefits (B) for every one (1) unit of food she pays in insurance premiums (M). What is the insurance company's expected profit from every unit of food it receives as insurance premium?

    a. -2
    b. 2
    c. 1
    d. **0 (zero)**
    e. Other, specify _____

9. This insurance plan

    a. **Is actuarially fair**
    b. Is actuarially unfair
    c. Could be either actuarially fair or actuarially unfair, depending on Alice's aversion to risk

d. Highly profitable for the insurer

10. If this is the only insurance plan available to Alice, what will be Alice's consumption bundle?

a. Alice will *not* buy any insurance. So, she will remain at bundle *A*.
b. Alice will buy 100 units of insurance. That is, she will pay 100 units of food in premiums irrespective of the weather. And if the weather is stormy, she will get 300 units of food from the insurer. As a result, she will end up at bundle *C*. Alice will be fully insured
c. Alice will end up at bundle *B*; that is, she will be partially insured
d. Alice will end up at bundle *E*, with 250 units of food in either state of nature. Alice will be fully insured

11. The certainty equivalent of this bundle—that is, the bundle Alice will enjoy when insurance is available—is _300_____ units of food.

[Not numbered] The value of insurance to Alice is _____.

a. Zero (0) units of food; Alice will not buy insurance
b. 60 units of food
c. 100 units of food
d. 200 units of food

Chapter 12

		Betty		
		Left	Center	Right
Al	Top	3, 1	2, 3	10, 2
	High	4, 5	3, 0	6, 4
	Low	2, 2	5, 4	12, 3
	Bottom	5, 6	4, 5	9, 7

12. In the Nash equilibrium of the game represented by the adjoining table, Al will choose _Low__ and Betty will choose __Center____.

		Allie	
		Red Sox	Mets
Brandon	Red Sox	2, 5	-1, -1
	Mets	1, 1	5, 2

13. Brandon and Allie want to go on a date one summer evening. Allie is a Red Sox fan, while Brandon is a Mets fan. Both teams are playing that evening, but not against each other. Each would rather watch their team, neither can force the other to watch a particular game and each is willing to suffer through the other's game if it means time together. The accompanying table illustrates both Allie and Brandon's payoffs for each choice, with Allie's payoff the second number of each cell and Brandon's the first number. If Brandon watches the Mets, what is Allie's best response?

A. Watch the Red Sox

B. Watch the Mets

C. Neither; she is indifferent between the Red Sox and the Mets

D. To not consider Brandon's choice

14. What is the Nash equilibrium of the game in the previous question?

A. Allie watches the Red Sox, Brandon watches the Mets

B. Allie and Brandon both watch the Red Sox

C. Allie and Brandon both watch the Mets

D. Answers B and C are both correct

15. (**4 points**) The Brandon-Allie game also has a Nash equilibrium in mixed (or, randomized) strategies. In this Nash equilibrium, Allie decides to watch the Red Sox game with probability _6/7_ and Brandon decides to watch the Red Sox game with probability _1/7_.

16. The adjoining diagram represents a two-stage game between Al and Betty. If Al chooses *l*, the game ends with Al getting 8 and Betty getting 10. If Al chooses *r*, Betty must choose either *L* or *R*. In the Nash equilibrium

Al's move

l

r

Betty's move

(8, 10)

L

R

(5, 1)

(11, 5)
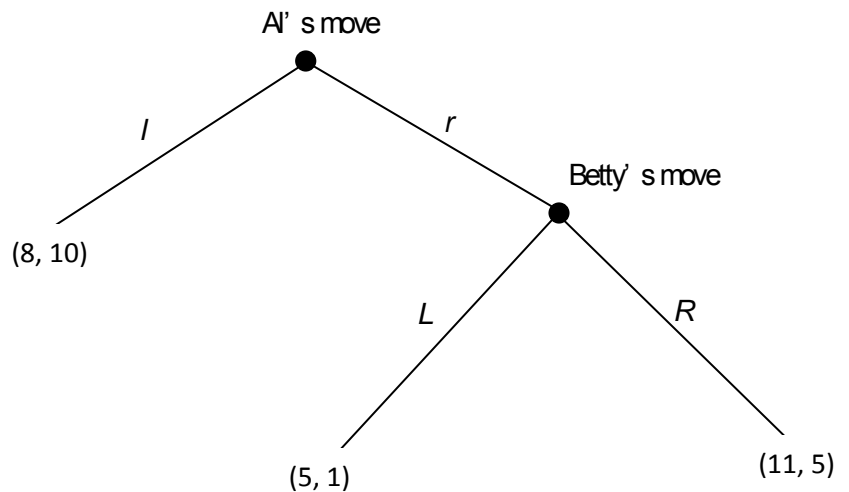
a. Al chooses *l* and Betty chooses *L*

b. Al chooses *r* and Betty chooses *R*

c. Both a and b are Nash equilibria

d. Al chooses *r* and Betty chooses *L*

e. Al chooses *l* and Betty chooses *R*

17. Continuing with the previous question, the subgame perfect Nash equilibrium (also called backward induction Nash equilibrium) is

a. Al chooses *l* and Betty chooses *L*

b. Al chooses *r* and Betty chooses *R*

c. Al chooses *r* and Betty chooses *L*

d. Al chooses *l* and Betty chooses *R*

18. Which of the following is true?

a. Game theory is the systematic study of conflict among human beings. It is not capable of explaining cooperation

b. Game theory can explain cooperation. For example, the Nash equilibrium of a game in which the Prisoners' Dilemma game is repeated, say, 200 times can show cooperative behavior under certain conditions

c.   Game theory can explain cooperation. For example, the Nash equilibrium of a game in which the Prisoners' Dilemma game is repeated indefinitely can show cooperative behavior under certain conditions

d.   Game theory explains systematically why random behavior by a human being implies irrationality

19. The accompanying table represents the Spouses' Dilemma game.

a.   In the Nash equilibrium of this game, both Homer and Marge will Loaf rather than Clean, thereby getting a payoff of 1 each. However, in the dominant strategy equilibrium, they both Clean rather than Loaf thereby getting a payoff of 2 each

b.   In the Nash equilibrium of this game, both Homer and Marge will Clean rather than Loaf. This, the cooperative outcome, is also the dominant strategy equilibrium

c.   If this game is repeated, say, 200 times, Homer and Marge may always Clean rather than Loaf in the Nash equilibrium of the repeated game. This is the cooperative outcome

d.   If this game is repeated indefinitely, the cooperative outcome can be the Nash equilibrium

Chapter 13

20. The *endowment effect*
A. Refers to the observation that people tend to value something more highly when they own it than when they don't
B. Refers to the observation that people tend to value something more highly when they don't own it than when they do
C. Refers to the fact that when confronted with many alternatives, people sometimes avoid making a choice and end up with the option that is assigned as a default
D. Refers to the observation that people do not have a strong attachment to the status quo

21. The *default effect*
A. Refers to the observation that people tend to value something more highly when they own it than when they don't
B. Refers to the observation that people tend to value something more highly when they don't own it than when they do
C. Refers to the fact that when confronted with many alternatives, people sometimes avoid making a choice and end up with the option that is assigned as a default
D. Refers to the observation that people do not have a strong attachment to the status quo

22. Suppose you conduct a study in which subjects are asked the following questions: 1. "Imagine that you have decided to go to a basketball game where the cost is $25 per ticket. As you enter the arena, you discover that you have lost your $25. Would you still pay $25 for a ticket?" 2. "Imagine that you

have decided to go to a basketball game and you pay $25 for the ticket. As you are walking into the arena you realize that you have lost your ticket. Would you pay another $25 for another ticket?" You find that 90% of your subjects answered "Yes" to the second question, compared to the 50% that answered "Yes" to the first question. This is an example of
A. The default effect
B. The endowment effect
C. Narrow framing
D. Dynamic inconsistency

23. Behavioral economists view the standard economic theory of decisions involving time (which was discussed in chapter 10) as being too unrealistic because people
A. Have lapses in self-control
B. Make systematic errors in forecasting the future
C. Are reluctant to abandon projects after incurring substantial sunk costs, despite low probabilities of success
D. All of the above

24. A person is *dynamically inconsistent* if
A. Lapses in self-control never occur
B. His preferences over the alternatives available at some future date do not change as the date approaches or once it arrives
C. He does not always follow through on his plans and intentions
D. All of the above

25. A person who is more willing to throw away a shirt that cost $20 than one that cost $200—even though he/she dislikes both shirts equally—is
A. Dynamically inconsistent
B. Dynamically consistent
C. Suffers from the sunk cost fallacy
D. Both B and C are correct

26. *Projection bias*
A. Is the tendency to evaluate future consequences based on tastes and needs at the moment of the decision making
B. Is the tendency to project current states of mind into the future
C. Can lead people to underestimate their adaptability
D. All of the above

27. Gabby flips a fair coin and it comes up heads. Gabby suffers from the *gambler's fallacy* if
A. She thinks the coin will come up heads on the next flip because it came up heads on the previous flip
B. She is more willing to bet on the outcome of the next flip
C. She thinks the coin is less likely to come up heads because it came up heads on the previous flip
D. She thinks the coin is equally likely to come up heads or tails on the next flip

28. Lily wants to invest in the stock market. She notices that the share price for Great Flowers Inc. has been rising for weeks. She chooses to invest in Great Flowers Inc. because she assumes it will continue to rise purely because of the run it has been on. Lily suffers from
A. The hot-hand fallacy
B. The gambler's fallacy
C. A present bias
D. The sunk cost fallacy

29. The *ultimatum game* is described as follows: Player *A* offers *X* dollars to Player *B*, where *X* is between zero and 100 dollars. If Player *B* accepts the offer, she gets the *X* dollars and Player *A* gets what's left (that is, 100 – *X* dollars). If Player *B* refuses Player *A*'s offer, both players get zero dollars.

   a. In this game, accepting Player A's offer is a *dominant* strategy for Player B. Nevertheless, in experimental plays of the ultimatum game, offers are often refused when perceived to be too low
   b. In this game, accepting Player A's offer is a *dominated* strategy for Player B. Not surprisingly, in experimental plays of the ultimatum game, offers are often refused when perceived to be too low
   c. In the Nash equilibrium of the ultimatum game, Player *B* plays a mixed strategy that plays *accept Player B's offer* and *reject Player B's offer* at random. Not surprisingly, in experimental plays of the ultimatum game, offers are sometimes accepted and sometimes refused
   d. None of the above

30. Choices made by experimental subjects playing the *ultimatum game* suggest
A. That in social situations, emotions such as anger and indignation influence economic decisions
B. That in social situations, emotions such as anger and indignation do not influence economic situations
C. That individuals are influenced by social motives
D. Both A and C are correct

I expect to post your grades on the course's Web site at http://myweb.liu.edu/~uroy/eco61/ by the night of December 18 (tomorrow). Please check your grade and email me as soon as possible if you see any errors. It will be a lot easier to fix errors if they are spotted *before* the grades are sent to the Registrar. Happy Holidays! Happy New Year!

ANSWER SHEET FINAL ECO 61 FALL 2008 UDAYAN ROY

NAME: _____

1	16
2	17
3	18
4	19
5	20
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8	23
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10	25
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15	30