Introduction

Question	Question title	Marks	Question type
i	Candidate instructions		Document

Markets and behavioral decision theory

Question	Question title	Marks	Question type
1.1	Problem 1a-b (counts 6%)	6	Multiple Response
1.2	Problem 1c-d (counts 14%)	14	Essay

Markets and behavioral decision theory

Question	Question title	Marks	Question type
2.1	Problem 2 (counts 10%)	10	Essay

Time inconsistency and self-control

Question	Question title	Marks	Question type
3.1	Problem 3 (counts 30%)	30	Inline Choice

Social preferences and fairness

Question	Question title	Marks	Question type
4.1	Problem 4a (counts 5%)	5	Essay
4.2	Problem 4b-d (counts 20%)	20	Essay
4.3	Problem 4e (counts 5%)	5	Essay
4.4	Problem 4f (counts 10%)	10	Essay

1.2

Problem 1c-d (counts 14%)

Explain your answers in Problem 1a-b, the multiple choice problem above. This question consist of two parts.

c) How can we explain the majority choices Problem 1a, using Prospect Theory? (count 6%)

d) Explain your answer to Problem 1b.

Fill in your answer here and/or on sketching sheets

Maximum marks: 14

2.1

Problem 2 (counts 10%)

Consider the following information.

10% of those who test for a disease are infected. A positive test result indicates that the person is infected. But the test is not perfect. Of those who are infected, the test gives a positive result in 90% of the cases. For those who are not infected, the test gives a positive results in 5% of the cases. Bill tests positive. We want to know if people can assess the correct probability that Bill is infected.

a) (2 percentage points) As the information is presented, will people typically overestimate or underestimate the probability that Bill is infected?

b) (5 percentage points) How can you rephrase the question, in terms of frequencies rather than probabilities, in such a way that more people will able to answer correctly?

c) (3 percentage points) The answer in b) illustrates that different ways of presenting the same information, affect how rational people appear to be. Discuss how this may influence how we interpret economic experiments. Are there elements of the lab-situation that would enhance rationality or elements that make it harder to be rational?

Fill in your answer here and/or on sketching sheets

Maximum marks: 10

4.1

Problem 4a (counts 5%)

What is a social norm? Please suggest a definition. Point out main differences in how psychologists and game theorists often use the term.

Fill in your answer here and/or on sketching sheets

Maximum marks: 5

4.2 Problem 4b-d (counts 20%)

Read the description in the attached pdf file. Then please answer the following:

Problem 4b (counts 10%): What are the conditions for individual *i* to choose a vegetarian diet? Explain.

Problem 4c (counts 5%): Consider now the situation where everybody is a meat-eater. Can this be a Nash equilibrium? Why/why not?

Problem 4d (counts 5%): Consider now the situation where everybody is a vegetarian. Can this be a Nash equilibrium? Why/why not?

Fill in your answer here and/or on sketching sheets

Maximum marks: 20

4.3 Problem 4e (counts 5%)

To prevent the pollution associated with meat consumption, the government now considers subsidizing vegetables. If the subsidy is implemented, vegetarians will receive a subsidy $V > 1$. To account for this in the budget equation, we can replace equation (1) by (1'):

(1') $Y + Vg_i = m + c_i + g_i$.

Problem 4e (counts 5%): What are the Nash equilibria/equilibrium if the subsidy is implemented? (Assume that social approval, as given by eq. (3), is unaffected by the subsidy.)

Fill in your answer here and/or on sketching sheets

Maximum marks: 5

4.4 Problem 4f (counts 10%)

Consider now a second society, identical to the one discussed above in all respects except that in the second society, a vegetarian diet is initially subsidized by a subsidy $V>1$. The government in this second society is now considering whether to remove the subsidy.

Problem 4f (counts 10%): What would you expect to happen in this second society if the subsidy is removed? Discuss. (You are not expected to provide a formal dynamic analysis; a comparative static analysis or verbal explanation is sufficient. Assume that social approval, as given by eq. (3) in the pdf file provided above, is unaffected by removal of the subsidy.)

Fill in your answer here and/or on sketching sheets

Maximum marks: 10

Question 6
Attached

Imagine a society with a large number of identical individuals. Everyone finds meat-based and vegetarian diets equally tasty, and considers the two types of diets perfect substitutes from a private point of view. However, consumption of meat causes pollution, while consumption of vegetables does not. Each inhabitant consumes a given quantity of food, choosing either a meat-based or a vegetarian diet. Keeping a vegetarian diet is more expensive, however: the cost of a meat-based diet is $m > 0$, while a vegetarian diet costs $m + 1$. The budget restriction of individual i is

$$(1)\ Y = m + c_i + g_i$$

where $Y > 1$ is the individual's exogenously given income, and c_i is i's non-food consumption of private goods (everything measured in monetary units). $g_i \epsilon \{0,1\}$ is i's extra cost of keeping a vegetarian diet, which is either zero (if i chooses to be a meat-eater) or 1 (if i chooses to be a vegetarian). In other words, $c_i = Y - m$ for meat-eaters and $c_i = Y - m - 1$ for vegetarians.

Assume that each i considers environmental quality as exogenously given, considering the pollution from her own meat consumption, if any, as too small to be noticed. Due to this and the fact that food quantities are given, both private food benefits and environmental benefits will be constant and can be disregarded below. Assume that i's utility U_i can be written as

$$(2)\ U_i = \beta c_i + s_i\,,$$

where $\beta > 0$ is a constant, and s_i is the social approval i receives from others.

Individuals observe each other's eating habits (for example, when sharing meals). Meat-eaters neither receive nor give social approval. Vegetarians, however, exchange social approval when they meet. Let a be the share of vegetarians in the population, and assume that each i views her own impact on a as negligible. Let the social approval received by individual i be given by

$$(3)\ s_i = aKg_i,$$

where $K > 0$ is a constant.