Exam 1. Calculators are allowed. Computers, notes or any other materials are not allowed.

Multiple choice questions (27p)

Correct answer +3p, incorrect answer -1p, no answer 0p.
Make sure to consider all alternatives before making your choice.

1. Ann and Bob argue over the cause of a recent increase in the use of chewing tobacco. Ann believes that the example set by sport stars has induced more people to start chewing tobacco. Bob thinks that lax border security has made it easier to smuggle chewing tobacco into the country. If one of these is the only possible explanation, then Ann is correct if...

   (a) price of chewing tobacco has decreased.
   (b) price of chewing tobacco has increased.
   (c) price of chewing tobacco has stayed the same.
   (d) This information is insufficient to answer the question.

2. The world market for coffee experiences a long-lasting negative supply shock. The demand for coffee is more elastic in the long run than in the short run. After the shock the price of coffee will first increase, ...

   (a) then increase some more.
   (b) then decrease but stay above the initial level.
   (c) then decrease below the initial level.
   (d) then decrease back to the initial level.
   (e) but the long-run direction of change depends on whether the long-run elasticity is less than one in absolute value.

3. Acme Inc owns a year-old van among many other capital goods. While deciding on its plans for the next year Acme needs to estimate the fixed cost of the van for the year. For this purpose Acme needs the following pieces of information.

   (a) Cost of renting an equivalent van for a year, opportunity cost of capital.
   (b) Current sale price of the van, its estimated sale price next year, opportunity cost of capital.
   (c) Current sale price of the van, rate of depreciation, opportunity cost of capital.
   (d) Purchase price of the van, its current sale price of, rate of depreciation.
   (e) Purchase price of the van, its estimated sale price next year, rate of depreciation.

4. The income elasticity of demand for vendace is -1.5. A downturn causes incomes to decrease by 6%. The resulting percentage change in consumers' vendace expenditure is about...

   (a) 9 (b) 4 (c) 3 (d) -3 (e) -9

5. Ann and Bob are offered the same investment opportunity with an uncertain return. They are both risk averse. Ann takes the chance while Bob gives it a pass. This is consistent with...

   (a) Ann being more risk averse than Bob.
   (b) Ann being less risk averse than Bob.
   (c) Ann having a higher initial wealth level than Bob.
   (d) Bob being infinitely risk averse.
   (e) Any of the above.

6. A monopolist has a constant marginal cost 4 and a fixed cost 5. The demand for its output is $P^D(Q) = 16 - 4Q$. The profit-maximizing price is...

   (a) 1.5 (b) 4 (c) 6 (d) 10

   (e) Production is not profitable, so the monopolist should not produce.

7. A small oil-producing nation has traditionally subsidized gasoline to keep its local price below the world market price. A new government scraps the subsidy, causing the local price of gasoline to soar. The resulting savings in government expenditure are paid out as a cash subsidy to all citizens. Consider the average household that gets a cash subsidy exactly equal to how much its gasoline expenditure was previously subsidized by the government. As a result of this reform the average household is...

   (a) better off.
   (b) better off if it has declining marginal utility of wealth, otherwise worse off.
   (c) equally well off.
   (d) worse off if it has declining marginal utility of wealth, otherwise better off.
   (e) worse off.

8. A country that imports its gas through pipelines sees one of the pipelines disrupted, while the amount supplied through remaining pipelines is at full capacity. The disruption causes the market price of gas to rise sharply from 100 €/CTU to 200 €/CTU (Convenient Thermal Unit), while the quantity purchased is reduced by 25%. To ease the pain the government begins to temporarily subsidize all gas purchases by 50 €/CTU. This subsidy is likely to reduce the purchase price by about ... (%, relative to 200 €/CTU)

   (a) 0 (b) 12.5 (c) 25 (d) 50 (e) 75

9. QuickLard Corp acquires FastCarbs Inc to become the largest purveyor of fast food in the Lintukoto metropolitan region. The companies' product lines are nearly identical. QuickLard's executives claim that the acquisition was motivated by cost-savings: namely to reduce waste by being able to move beef patties that are close to expiry date between restaurants. Consumer advocates suspect that the actual motivation was to increase QuickLard's market power in the local subpremium burger market. Which of the following would be the strongest indication for the latter?

   Compared to when they were separate companies, after the acquisition their combined...

   (a) profits increase.
   (b) quantity of burgers sold decreases.
   (c) quantity of burgers sold increases.
   (d) total cost of beef patties decreases.
   (e) total cost of beef patties increases.

Text questions

I (12p) Provide a brief explanation (1–3 sentences) for the following concept in economics. You can use an example (real or hypothetical) to support your explanation. The goal is to make the concept intelligible for a reader who has not studied microeconomics.

   (a) Private good
   (b) Certainty equivalent
   (c) Incidence of taxation
   (d) Lumpy costs

II (17p) A forestry company owns a number of fine paper mills in several different countries. It has a modest world market share of 10%. During a spike in world market demand its workers in one of the countries go on strike causing the production there to cease. As the strike becomes unusually long-lasting many are surprised at the company's intransigence in the face of a dispute with relatively low monetary stakes.

   One potential explanation is that the company benefits from the strike for reasons that have nothing to do with the labor dispute itself. How could this be so? Explain briefly (3–5 sentences) and use a graph in demand-supply framework to illustrate your argument.

For the remaining questions you need to show the arguments and steps behind your reasoning, backed up by calculations where relevant.

III (24p) Cabbage is the main staple in Molvanîa. The demand is $P^D(Q) = 100 - 2Q$ and supply $P^S(Q) = 4 + Q$, where quantities are in tons/month and prices in Strubl/kg.

(a) In the Republic of Molvanîa the price of cabbage is at a level that maximizes total surplus in the cabbage market. What is the price and monthly consumption of cabbage in Molvanîa?

(b) After a coup the People's Republic of Molvanîa is declared. PR Molvanîa institutes a cabbage tax with the purpose of maximizing tax revenue. How high is this tax (Strubl/kg) and the resulting tax revenue and consumer surplus?

(c) After another coup the Shiny Happy People's Republic of Molvanîa is declared. The new government vows to eliminate profits by using price regulation. The price ceiling for cabbage is reduced continuously until all producer surplus is eliminated. At what level of the ceiling does SHPR Molvanîa first achieve this aim, and what is the resulting consumer surplus?

IV (20p) The town of Putkinotko owns a swimming pool complex. On weekdays (that is, Monday through Friday) there are 1000 potential pool users in the town. On weekends (Saturday, Sunday) the number of daily potential visitors doubles. Every day the reservation values of potential visitors are distributed uniformly between $[0, 10]$ €. The pool can accommodate up to 2000 visitors per day without becoming crowded. Each visit adds €2 to the costs, mainly due to cleaning and maintenance.

(a) What is the efficient number of visitors and the efficient price of a visit on weekdays and weekends respectively?

(b) The pool also incurs a fixed cost of 1000 €/day due to factors such as minimum staffing requirements. The town is unwilling to subsidize the pool from other funds so the pool has to at least break even. Given this constraint, how should the visits be priced on weekdays and weekends respectively in order to maximize the total weekly welfare generated by the pool?