Kyiv School of Economics
MA Program in Economics

Admission Examination in Economics

Instructions:

1. Do not turn this page until told to do so.
2. You have **one hour and fifteen minutes** to answer the questions.
3. The exam consists of two parts: Macroeconomics and Microeconomics. Each part consists of 5 problems that are all **equally weighted** but have varying difficulty levels.
4. Answers in any language other than English will receive **zero** credit.
5. No dictionaries are allowed.
6. No calculators or other similar devices are permitted. Mobile phones must be switched off for the duration of the exam.
7. **Positively no cheating. If caught cheating, you will be asked to leave the room immediately, and your grade for this exam will be zero.**

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Kyiv

Part I – Macroeconomics

1. Explain the distinction between two popular inflation indexes: a Consumer Price Index (CPI) and a GDP deflator.

2. Suppose that an increase in government expenditures has boosted the nation's GDP by $ 5 mil. By how much has the government increased its spending if the marginal propensity to save is 0.3? Show your calculations.

3. What is the maximum amount of money that can be created by the banking system out of a new deposit of 1 000 dollars, if the required reserve rate is 20%?

4. Explain the crowding-out effect of expansionary fiscal policy.

5. Explain why the aggregate supply curve is assumed to be horizontal (or upward-sloping) in the short run but vertical in the long-run. Use a graph to support your argument.

Part II – Microeconomics

1. *Complete the following sentences using the words in brackets*:

A price ceiling is a government imposed limit on how _____ (A: low; B: high) a price can be charged for a product. For a price ceiling to be effective, it must be _____ (A: below; B: above) the equilibrium price. An example of a price ceiling is _____ (A: minimum wage; B: rent control). An effective price ceiling results in a _____ (A: shortage, B: surplus) of the product in the market. In order to maintain the price ceiling over time, the government must take action to _____ (A: remove excess supply; B: cover excess demand.)

2. A consumer's utility function over goods X and Y is $U(X,Y)=XY + 10Y$. Suppose this consumer has an income of $110, the price of good Y is $2, and the price of good X is $1. What is the optimal consumption bundle (X^*,Y^*) for this consumer?

3. Consider a firm owned and operated by two entrepreneurs who contribute to the firm's activities and share its profits equally. Suppose that one of them has a chance to enroll in a training program consisting of up to 10 classes (any number of classes up to 10 can be chosen). Each class costs $1000. The increase in entrepreneur's productivity due to this training results in a 10% increase in firm's profits per class (relatively to the pre-training profit level of $15000).

a) If the entrepreneur has to pay for this training out of his own pocket, how many classes will he choose to take? Explain briefly.

b) If the firm's profits were distributed in proportion to each owner's productivity contribution, how many classes will the entrepreneur choose to take (assume that he still pays for this training out of his own pocket)? Explain briefly.

c) If the profits are shared equally, there is a "market failure" problem. Which market has "failed" in this example? Why?

d) Suggest a way to correct for this market failure problem (assume that the profits are still shared equally).

4. Using supply and demand diagrams show what happens in the market for mobile phones if mobile operators increase their service rates.

5. Suppose the demand for cigarettes is $Q = 15 - 0.5P$ and the supply of cigarettes is $Q = P - 3$, where P is the price per pack of cigarettes. Suppose the government imposes a cigarette tax of \$3 per pack. What is the government revenue from the tax?