KÖZGAZDASÁGI ALAPISMERETEK (ELMÉLETI GAZDASÁGTAN) ANGOL NYELVEN

KÖZÉPSZINTŰ ÍRÁSBELI VIZSGA

2009. május 22. 8:00

Az írásbeli vizsga időtartama: 180 perc

OKTATÁSI ÉS KULTURÁLIS MINISZTÉRIUM
Important Information

The test sheet is complex, broken down into sections according to the different types of questions. When working out the solution please take into account the additional information in *italic font*. Please follow the instructions when answering the questions. Maximum score will only be given, if all subsections of the question have been answered.

Solutions and elaborations should be written on the test sheet. All drafts should be written on the additional pages provided. If the answer requires additional pages, please indicate this next to the relevant question.

Pencils may be used to draw up diagrams, the final solution, however; has to be finalized in pen.

Please use a ruler to draw precise diagrams.

You may only use non-programmable calculators during the written examination.

Good luck with your examination!
I. Multiple choice and short response questions

Multiple choice questions

We have provided 4 possible answers that correctly complete the statements in the questions, but only one of the answers is correct. The other answers are either partially correct or completely wrong. Choose the letter corresponding to the correct answer and write it into the table before the question, into the slot corresponding to the given question number.
Attention! Only one answer will be accepted. No points will be awarded for multiple or unclear answers.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. According to the law of supply, price increase causes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>a) the demand function to shift to the right.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>b) the supply demand function to shift to the left.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>c) the amount in demand to increase.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>d) the amount supplied in demand to increase.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Let us suppose that there is a utility maximising consumer, who consumes only two commodities (commodity (x) and commodity (y)). Optimally the consumer chooses a commodity basket where</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>a) the quantity of the two commodities is the same.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>b) the price of the two commodities is the same.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>c) the utility of both commodities are the same.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>d) the marginal utility per HUF 1 is the same for both commodities.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Accounting costs include</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>a) all costs featured on invoices.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>b) all costs, which are not explicit costs.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>c) all implicit costs.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>d) all alternative costs of the enterprise.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Let us suppose that there is perfect competition in an industry. In this case we can say that any random company belonging to said industry is</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>a) price setting.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>b) able to satisfy market demand on its own.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>c) both</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>d) neither</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. If we are talking about negative externalities, and supposing optimal social production,</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>a) MSC &gt; MSB.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>b) MSB &gt; MSC.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>c) MSB = MSC.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>d) any of the above can occur.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
6. An index number, which can measure the output of a macro-economy is the  
   a) unemployment rate.  
   b) inflation rate.  
   c) budget deficit.  
   d) gross domestic product.

7. In the three-player model of the macro-economy household savings ($S_H$)  
   a) are featured on the income side of the current items account.  
   b) have a negative sign, if consumption exceeds the income earned.  
   c) are equal to the difference between wages and tax.  
   d) all three statements are true.

8. If money is used as a medium of circulation in the economy then  
   a) different quality items are compared with the help of money.  
   b) it is used as pay for purchased commodities.  
   c) it is withdrawn from circulation in order to use it for future purchases.  
   d) it is used as a means of exchange in international relations.

9. One of the possible tools of budgetary policy is  
   a) decreasing central bank interest rates.  
   b) increasing interest rates on bank deposits.  
   c) decreasing personal income taxes.  
   d) the improvement of profit expectations.

10. Which of the following is part of the balance-of-payments on current account?  
    a) the balance of trade  
    b) the capital balance  
    c) the budget  
    d) fluctuation in central bank reserves.
II. Questions requiring longer answer

1. True/false questions

Decide whether the statements below are true or false. Please mark your decision by writing the letters T (true) or F (false) in front of the statements. Unclear markings will not be accepted.
ATTENTION! ALL ANSWERS HAVE TO BE EXPLAINED! All correct explanations are worth 1 point.

1) The point of saturation is the point of the total profit function, where the value of total profit equals zero.  

2 points

2) Price elasticity is an index number, which can be used to characterise the relationship between the consumption of any two commodities.

2 points

3) The difference between average cost and average variable cost is always a positive number.

2 points

4) The value of domestic production in a country is always larger than national income, because foreigners also contribute to domestic production.

2 points

5) If we increase government purchases within the framework of budgetary policy then taxes have to be increased simultaneously.

2 points
6) Potential output cannot be achieved when unemployment rates are high.

2 points

2. Definitions

Write down briefly the definitions of the following concepts or economic phenomena.

A) Market period

2 points

B) Variable cost

2 points

C) Gross national income

2 points

D) Inflation

2 points
3. Elaborative question

Please answer this question in several sentences, elaborating on the correlations on which your answer is based in detail. Make sure your thoughts are conveyed clearly and coherently. Structure your answers in a way that corresponds to your main thoughts. You may also write down formulas and draw diagrams if necessary.

Write down the characteristics of the indifference curve systems.
Define the concept of the indifference curve and list its attributes.
Write down the characteristics of the indifference curve map and prepare its diagram using a specific example.
4. Matching

*Match the following notions and definitions.*

Decide which components of the budget are influenced by the government measures listed below. Choose the appropriate component and write the corresponding letter into the column belonging to the number.

*E.g. increasing support for textbook*

<table>
<thead>
<tr>
<th>Number of measure</th>
<th>e.g.</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Letter of budgetary component</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**MEASURES:**
1. The 2 percent reduction of personal income tax rates.
2. Reducing central bank base rate by 25 base points.
3. Purchasing baby bonds for all new-borns.
4. Financing the construction of highway
5. Increasing the family allowance.

**COMPONENTS OF THE BUDGET:**
A) Government commodity purchases, investments
B) taxes, duties
C) Subsidies, allowances
D) none of the above

Provide an explanation to your answer for Measure 2.

5 points
5. Analysis, evaluation question

Your task is to evaluate the effects of a certain market event. Answer in a couple of sentences, or select and mark the correct answer(s) from the options provided.

This question follows the changes on the market of apples, and you have to evaluate the effects of various economic events.

5.1. Evaluate, one by one, the effects the various economic events below have on the market and determine the direction of change. Complete the sentences to make them true using phrases, which are characteristic of these changes (increases, decreases).

   a) If due to a summer drought a smaller quantity of apples are produced, then the quantity of apples offered for sale …………………
   b) If the demand function of apples shifts to the right, and supply remains unchanged then the market price of apples …………………
   c) A popular magazine publishes a series of detailed articles about the positive physiological effects of apples. After these articles have been published the purchasing intention of buyers ……………
   d) A significant shipment of good-quality and low-price apples arrives from abroad. As a result of this aggregate supply …………………
   e) If excess supply develops on the apple market due to ample harvests, then the market price of apples will probably ……………

5.2 Circle the letter(s) on the line below corresponding to the event(s), which result in the shifting of the supply function.

   a) b) c) d) e)  

7 points
III. Calculation and plotting questions

Follow the instructions indicated for each question carefully: Complete the necessary calculations and/or prepare the diagrams according to the given specifications, mark your answers with the number of the sub-question in the exercise. In order to get maximum points all sub-questions have to be answered correctly.

Question 6

The following diagram shows the marginal cost function, average cost function and the average variable cost function of a fully competing company. The valid market price is currently $P_0$.

6.1st Determine graphically how much the company produces with the given prices and indicate this on the diagram with $q^*$.
6.2nd Indicate on the diagram the size of achievable profit if production is $q^*$.
6.3rd Draw the short-term supply function of the competing company into the diagram and indicate it with $S$.
6.4th Complete the diagram with a rectangle, which demonstrates the amount of variable cost. Mark the corners of the rectangle with the letters K, L, M and N.
Question 7

A company is planning to expand its capacity. There are two proposals to choose from concerning equipment procurement:

**Proposal 1**: procurement price is HUF 7 million, expected lifetime is 4 years, and expected annual yield is HUF 2 million per year

**Proposal 2**: procurement price is HUF 6 million, expected lifetime is 4 years, and the amounts of expected annual yields are shown in the table below:

<table>
<thead>
<tr>
<th>Number of years</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expected annual yield (HUF)</td>
<td>2 100 000</td>
<td>1 900 000</td>
<td>1 200 000</td>
<td>1 175 000</td>
</tr>
</tbody>
</table>

Current interest rate is 8%, assuming this will not change in the examined period.

7.1. Calculate the present net value of both proposals.

(Please perform calculations to four decimal places and round off final result to thousand Forints.)

7.2. Compare the two proposals and make a decision as to which proposal the company should implement. Explain your answer in writing.

12 points
Question 8

The diagram below shows a four-player macro-economic circulation model. The diagram covers all revenue processes of the economy, which means that no other transactions are present apart from the revenue flow indicated by the arrows.

8.1. Name the following items of circulation:

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>b</td>
<td>c</td>
<td></td>
</tr>
<tr>
<td>?</td>
<td>?</td>
<td>?</td>
<td></td>
</tr>
</tbody>
</table>

8.2. Write down the macro-economic symbols corresponding to the numbered arrows of the revenue flow, and using the known identities, determine their numerical value. Write the results of your calculations in the table below along with the symbols.

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

13 points
Question 9

In a two-player macro-economy with an income level of $Y = 40\,000$ consumption is $36\,000$, and with an income level of $Y = 30\,000$ household savings are $2\,000$.

9.1. Calculate the values of autonomous consumption and the marginal propensity for consumption; and write down the equation for the consumption function.

9.2. Let us suppose that households pay $T = 2500$ tax from their income following the state’s economic commitment. Write down the equation of the new consumption function.

9.3. Calculate the income at which the new consumption function intersects the 45° line.

7 points
<table>
<thead>
<tr>
<th>Topic</th>
<th>Question number</th>
<th>Maximum points</th>
<th>Points scored</th>
<th>Maximum points awardable for the topic</th>
<th>Points scored in topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple choice and short response questions</td>
<td>Multiple choice questions</td>
<td>20</td>
<td></td>
<td></td>
<td>20</td>
</tr>
<tr>
<td>Questions requiring longer answer</td>
<td>1. True/false questions</td>
<td>12</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. Definitions</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. Elaborative question</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4. Matching</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5. Analysis, evaluation question</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calculation and plotting questions</td>
<td>Question 6</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Question 7</td>
<td>12</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Question 8</td>
<td>13</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Question 9</td>
<td>7</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Points of written examination** 100

______________________________
Correcting teacher

Dátum: .........................

<table>
<thead>
<tr>
<th>Elért pontszám</th>
<th>Programba beírt pontszám</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Points scored</td>
</tr>
<tr>
<td></td>
<td>Points entered into programme</td>
</tr>
</tbody>
</table>

Választásos, egyszerű rövid választ igénylő feladatok
Multiple choice and short response questions

Szöveges (kifejtendő) feladatok
Questions requiring longer answer

Számítást, ábrázolást igénylő feladatok
Calculation and plotting questions

______________________________
javító tanár / Correcting teacher

______________________________
jegyző / Notary

Dátum/Date ................................  Dátum/Date ................................