Олимпиада для студентов и выпускников – 2016 г.

Направление «Экономика»

Профили:
«Экономика: исследовательская программа»   **КОД - 110**
«Прикладная экономика»   **КОД – 111**

Время выполнения задания – <u>180</u> мин., язык – <u>русский/английский.</u>

Решите все три задачи

Веса задач приведены в скобках

Инструкции

- Решение может быть представлено как на русском, так и на английском языке. Никаких дополнительных баллов, впрочем, как и штрафов, за решение на английском языке не предусмотрено.

- Решение должно быть хорошо структурированным, изложено грамотным языком, а почерк – распознаваемым. Ответы на качественные вопросы должны быть убедительно аргументированы, но длинные рассуждения, не относящиеся к сути дела, могут негативно повлиять на оценку.

- Все шаги в решении должны быть обоснованы, все вычисления должны присутствовать в работе. Калькуляторами пользоваться запрещено.

- Черновики не предусмотрены, решение сразу оформляется на чистовик.

- Если приведенное решение является неверным, перечеркните его (перечеркнутое решение не проверяется) и приведите корректную версию.

- При наличии нескольких вариантов решения одного и того же задания, проверяющий сам определяет, какое из решений подлежит проверке, а апелляции с просьбой проверить другой вариант решения не принимаются.

Национальный исследовательский университет «Высшая школа экономики»

1. [50 points] Answer the following short questions

(a) [8 p.] The two countries with the largest international reserves are China ($3,900 bln) and Japan ($1,260 bln). China has a fixed exchange rate regime and grows with the average rate of 8% while Japan's exchange rate is flexible and the country is stagnating.

  (i) What do you think is the best argument in favour of having immense international reserves?
  (ii) What is the strongest objection to have excessively high international reserves?
  (iii) Discuss pros and cons of different exchange rate regimes.

(b) [9 p.] Consider an open economy in equilibrium with recessionary gap and fixed prices and wages. The exchange rate is fixed and the current account is fully offset by the capital account. The failure to repay its national debt causes a complete restriction of foreign capital flow in and out of the economy. How will the economy adjust to the new equilibrium without capital mobility? Illustrate graphically and provide an intuitive explanation.

(c) [8 p.] Suppose that several students work over a group assignment. The class-teacher announced that each member of the group will get the same mark for this assignment based on the quality of the paper submitted. Comment on the statement: 'Under these rules the quality of the final paper will be below the optimal level for this group.'

(d) [8 p.] Consider the Solow model of a closed economy with technological progress that follows a balanced growth path. An influx of refugees increases labour supply in the country of asylum while the growth rate of the population remains intact.

  (i) What will be the immediate effect on GDP per worker? Sketch a graph showing the path of the growth rate of GDP per worker over time following this shock.
  (ii) What will be the immediate and the long-run effect on consumption per worker?

(e) [8 p.] Albert Hirshman emphasized two general types of actions through which members of an organization can respond to its malfunctioning: exit and voice. In the first case, a member withdraws from an organization. In the second she 'raises her voice' to improve matters. Would you typically expect these two mechanisms to be substitutes or complements? That is, once exit becomes cheaper, would you expect more voice? Illustrate your answer with examples.

(f) [9 p.] Give an example of two two-person games that would differ only in whether the first player's action is observed by the second player, and where the first player would gain from this observability. Give also an opposite example, where observability would decrease the first-player's payoff.

2. [25 points] In a closed economy with fixed prices and wages the government decides to cut the tax rate which is levied proportionally on households' income.

(a) Derive the autonomous expenditure multipliers for the case of balanced budget policy and without balancing the budget. HINT: Think about alternative instruments to balance the budget.

(b) Compare the multipliers in (a) and explain intuitively why they are different.

(c) Illustrate graphically using IS-LM model the effects of the tax cut for the cases mentioned in (a).

Assume now that money demand depends on the households' consumption rather than total income and money supply is constant.

2

(d) Derive analytically the formula for the new LM schedule.

(e) Analyze graphically and explain intuitively the effects of the tax cut in the economy with and without the balanced budget rule.

3. [25 points] Consider an industry with two firms that have identical cost functions given by $c(q_i) = 0.5(q_i)^2$, where q_i stays for the output produced by firm i $(i = 1, 2)$. The inverse demand function is $P(Q) = 16 - Q$.

(a) Compute the Cournot equilibrium. Find the resulting profits.

(b) Suppose, now both firms can sell output at world market at the competitive world price of p per unit. But these firms are the only producers at domestic market due to high import tariffs (and citizens can purchase the product at domestic market only as otherwise they have to pay extremely high import tariffs). Find all possible values of world price p under which it is profitable for domestic producers to sell both at domestic and world markets.

(c) Suppose that both firms can sell output at world market at the competitive world price of 7 per unit and all other conditions of part (b) are satisfied. Find the resulting domestic and foreign (i.e. world market) sales. Calculate each firm's profit and compare with the profits from part (a). Explain the result.