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SAMPLE SECOND MIDTERM EXAMINATION

PART I: SHORT ANSWER **[36 POINTS TOTAL]**

Answer all questions. Be sure to explain your answers and to draw diagrams where they are appropriate.

1. How does an increase in the wage affect the amount of labor a typical household wants to supply? Be sure to discuss both the income and substitution effects of the wage increase. **[9 points]**

2. Suppose there are two countries, France and Italy, and two goods, pasta and cheese. A typical worker in France can produce 2 pounds of pasta or 4 pounds of cheese in a day, while a typical worker in Italy can produce 3 pounds of pasta or 3 pounds of cheese. In what range does the relative price of pasta (P_{Pasta}/P_{Cheese}) have to be for both countries to want to trade? **[9 points]**

3. How are increases in workers' education likely to affect a country's normal output per person? **[9 points]**

4. How would an increase in the purchase price of new capital goods affect the investment demand curve? **[9 points]**

PART II: PROBLEMS **[40 POINTS TOTAL]**

Answer both parts of each question. Be sure to explain your answers and to draw diagrams where they are appropriate.

5. Consider the markets for low-skilled and high-skilled labor.

a. Suppose the government introduces a subsidy to the employment of low-skilled workers physically paid to firms. (For simplicity, assume the government pays firms some amount for each low-skilled worker they hire.) How will the subsidy affect the employment of low-skilled workers, the wage low-skilled workers receive, and the net-of-subsidy wage for low-skilled workers paid by firms? Will this policy tend to increase, decrease, or have no effect on income inequality (or is it not possible to tell)? **[10 points]**

b. Suppose that widespread misuse of office computers to play video games and shop during work hours lowers the productivity of high-skilled workers, but has no effect on the productivity of low-skilled workers (whose jobs typically do not use computers). How is this development likely to affect income inequality? **[10 points]**

6. Consider avocados, a good that the United States both produces domestically and imports. Suppose that because of increasing popularity of avocado toast in the United States, American consumers' tastes shift toward avocados. (For simplicity, assume that the U.S. is a small enough part of the world market that its behavior will not affect the world price of avocados relative to other goods.)

a. How will this development affect the production and consumption of avocados in the United States, American imports of avocados, and the producer surplus of American avocado producers? **[10 points]**

b. Illustrate the effects of the change in American tastes using the production possibilities curve/consumption possibilities curve with trade (PPC/CPC) diagram for the United States. How, if at all, will the change affect the composition of goods the U.S. chooses to produce? **[10 points]**

PART III: MULTIPLE CHOICE **[24 POINTS TOTAL]**

Circle the ***best*** answer to each question. Each question is worth 2 points.

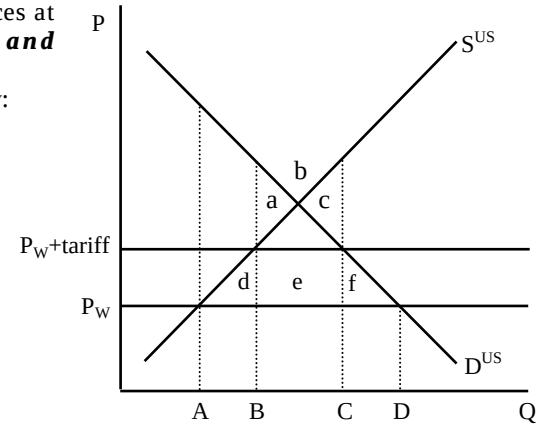
7. If inflation rises and the real interest rate does not change, the nominal interest rate has:
- **a.** risen.
- **b.** fallen.
- **c.** stayed the same.
- **d.** it is not possible to tell.

8. The demand for inventions is likely to be increased by:
- **a.** stronger property rights.
- **b.** a national emergency.
- **c.** greater competition.
- **d.** all of the above.
- **e.** none of the above.

9. Some of the things William Nordhaus discusses in ""Do Real-Output and Real-Wage Measures Capture Reality?" are:
- **a.** "the silver bullet of price indexes," the costs of blindness, the big bang, and Socrates.
- **b.** "the fountain of youth of technological progress," spectrography, slavery, and Albert Einstein.
- **c.** "the Achilles heel of real output and wage measures," light flux, *Homo erectus*, and Adam Smith.
- **d.** "the invisible hand of necessity as the mother of invention," telescopes, the Mayan calendar, and Helen Keller.

10. A permanent decrease in government purchases will cause the normal real interest rate to:
- **a.** rise.
- **b.** fall.
- **c.** stay the same.
- **d.** stay the same if the economy is in a recession, but fall otherwise.

To the right is a diagram for a good that the U.S. both produces at home and imports and where there is a tariff. ***Questions* 11 *and* 12 *are about the market for this good.***



11. U.S. imports after the imposition of the tariff are shown by:
- **a.** the vertical distance from the origin to P_w.
- **b.** the vertical distance from the origin to P_w+tariff.
- **c.** the horizontal distance from the origin to C.
- **d.** the horizontal distance from A to B.
- **e.** the horizontal distance from B to C.

12. The deadweight loss associated with the tariff is area:
- **a.** a.
- **b.** b.
- **c.** c.
- **d.** d.
- **e.** e.
- **f.** f.
- **g.** a + b.
- **h.** a + c.
- **i.** d + e + f.
- **j.** d + f.
- **k.** none of the above.

13. The marginal revenue product of capital curve for a monopolist:
- **a.** slopes up.
- **b.** slopes down.
- **c.** is flat.
- **d.** it is not possible to tell.

14. According to Thomas Piketty and Emmanuel Saez in "Income Inequality in the United States, 1913–1998," income inequality in the United States over the past 100 years:
- **a.** has been rising fairly steadily.
- **b.** has been falling fairly steadily.
- **c.** has changed little.
- **d.** was high until roughly the 1930s, then fell sharply, then was stable through roughly 1970, and has generally been rising since.
- **e.** was generally rising until the 1930s, then changed little until around 1990, when it started rising again.
- **f.** was generally falling until the Great Depression, then rose sharply until World War II, then fell sharply, and has been fairly stable since.

15. The following is included in U.S. GDP:
- **a.** the market value of land bought and sold in the United States.
- **b.** the market value of final goods produced and sold abroad by companies headquartered in the United States.
- **c.** the market value of services produced and sold to consumers in the United States.
- **d.** the market value of the existing factories and machines used to produce goods in the United States.

16. The present value of a payment to be received in the future is smaller:
- **a.** the sooner the payment will be received.
- **b.** the later the payment will be received.
- **c.** the higher the interest rate.
- **d.** the lower the interest rate.
- **e.** a and c.
- **f.** a and d.
- **g.** b and c.
- **h.** b and d.

17. The Federal hourly minimum wage was $1.60 in 1968 and is $7.25 today. The Consumer Price Index was roughly 30 in 1968 and is roughly 240 today. These figures imply that the real (that is, inflation-adjusted) minimum wage:
- **a.** is lower today than it was in 1968.
- **b.** is higher today than it was in 1968.
- **c.** is the same today as it was in 1968.
- **d.** because the problem does not provide information about inflation, it is not possible to tell from the information provided.
- **e.** because the problem does not provide information about average wages, it is not possible to tell from the information provided.

18. ***All*** of the following will cause the investment demand curve to shift to the left ***except***:
- **a.** firms' expectations of future marginal revenue products of capital become more pessimistic.
- **b.** the real interest rate rises.
- **c.** the government imposes new taxes on investment.
- **d.** the price of steel, an input into the production of capital goods, rises.