

SAMPLE SECOND MIDTERM EXAMINATION

PART I: SHORT ANSWER

[60 POINTS TOTAL]

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

1. How are increases in workers' education likely to affect a country's normal output per person? **[15 points]**
2. If the interest rate rises, how (if at all) will the present value of a fixed payment to be received five years in the future change? **[15 points]**
3. Suppose a country produces two types of goods (agricultural goods and manufactured goods), and workers within the country differ in their abilities. If the terms of trade change so that 1 unit of manufactured goods trades in world markets for more agricultural goods than before, how will this change the combination of the two goods the country wants to produce? **[15 points]**
4. If the government increases government purchases (holding taxes the same), what will this do to the normal level of investment and the normal real interest rate? **[15 points]**

PART II: PROBLEMS

[60 POINTS TOTAL]

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

5. Consider the market for solar panels, which the United States both imports and produces domestically. You can assume that the market for solar panels is perfectly competitive and that there is a perfectly elastic world supply of solar panels.
 - a. Show how a per-unit subsidy paid to American solar panel producers could be used to reduce our imports of solar panels. **[15 points]**
 - b. Would the subsidy affect the consumer surplus of American consumers? Would it cause a deadweight loss? **[15 points]**
6. Consider the market for factory workers in Malaysia.
 - a. Suppose that Malaysia imposes a minimum wage for the first time, and that it is above the prevailing equilibrium wage for factory workers. All else equal, what is this likely to do to the employment and unemployment of Malaysian factory workers? **[15 points]**
 - b. But, perhaps all else is not equal. Suppose that at the new minimum wage, Malaysian workers are healthier and more productive. How, if at all, would this change the analysis in part (a)? **[15 points]**

PART III: MULTIPLE CHOICE

[30 POINTS TOTAL]

Circle the **best** answer to each question. Each question is worth 3 points.

7. In our aggregate production function framework, $Y^*/POP = f(K^*/N^*, T) \cdot (N^*/POP)$, N^*/POP is:
 - a. average education per worker.
 - b. a measure of the quality of institutions.
 - c. normal employment as a fraction of the population.
 - d. the unemployment rate.
8. If no prices change between year t and year $t+1$, but the quantities of goods and services that are produced increase:
 - a. nominal GDP does not change between year t and year $t+1$, but real GDP increases.
 - b. real GDP does not change between year t and year $t+1$, but nominal GDP increases.
 - c. neither nominal GDP nor real GDP increases between year t and year $t+1$.
 - d. both nominal GDP and real GDP increase between year t and year $t+1$.
9. An outward shift of the demand curve for the good produced by some industry will cause the marginal revenue product of labor curve in that industry to:
 - a. shift up.
 - b. shift down.
 - c. remain the same.
 - d. it is impossible to tell.

10. The real interest rate (r), the nominal interest rate (i), and inflation (π) are related by the formula:
- $r = i + \pi$.
 - $r = i^\pi$.
 - $r = i - \pi$.
 - $r = i/\pi$.
11. Suppose a typical worker in Vietnam can produce 20 shirts or 10 books in a day, and a typical worker in France can produce 40 shirts or 40 books in a day. If the terms of trade are 1.5 shirts per 1 book:
- Both Vietnam and France will want to trade shirts for books.
 - Both Vietnam and France will want to trade books for shirts.
 - Vietnam will want to trade shirts for books, and France will want to trade books for shirts.
 - Vietnam will want to trade books for shirts, and France will want to trade shirts for books.
 - Vietnam will want to trade either shirts for books or books for shirts, but France will not want to trade either shirts for books or books for shirts.
12. The subjects discussed by Claudia Goldin and Lawrence F. Katz in “The Power of the Pill: Oral Contraceptives and Women’s Career and Marriage Decisions” include:
- “The Controversy over Planned Parenthood,” “Congressional Gridlock,” and “Lyndon Johnson’s Change of Heart.”
 - “State Variation in Laws Affecting Contraceptive Services,” “Career Investment,” and “Age at First Marriage, Sex, and Fertility Expectations.”
 - “The Spread of Planned Parenthood Clinics,” “Doctors versus Lawyers,” and “Richard Nixon’s Farsighted Family Planning Policies.”
 - “Variation in Church Attendance across States,” “Twin Births,” and “Cohabitation, Premarital Sex, and the Unequal Division of Housework.”
13. In 2011, tuition and fees at Berkeley for California residents were roughly \$7000; in 2017, they were roughly \$14,000. Over that period, the CPI rose from 225 to 245. The 2011 tuition and fees in 2017 dollars are:
- $\$7000 \cdot \frac{\$14,000}{\$7,000}$.
 - $\$14,000 \cdot \frac{\$7,000}{\$14,000}$.
 - $\$7000 \cdot \frac{245}{225}$.
 - $\$14,000 \cdot \frac{225}{245}$.
14. A rise in the real interest rate causes the quantity of investment demanded by firms to:
- increase, because a higher real interest rate lowers the purchase price of capital.
 - increase, because the rate of return is higher.
 - decrease, because a higher real interest rate makes capital less productive.
 - decrease, because the present value of future marginal revenue products of capital are lower.
15. In an economy with no forces, such as unions or minimum wage laws, that prevent wages from falling, the normal unemployment rate will be:
- positive, because of “frictional” or “churn” unemployment.
 - positive, because some members of the population, such as many young children and retirees, do not want to work.
 - positive if the economy is in a recession, but zero otherwise.
 - zero.
 - (a) and (b).
16. The following developments will tend to increase income inequality:
- technological change that makes high-skilled workers more productive.
 - increased education for high-skilled workers but not for low-skilled workers.
 - a rise in the world relative price of goods and services produced by low-skilled workers.
 - (a) and (b).
 - (a) and (c).
 - all of the above.
 - none of the above.