Midterm Exam

You have one hour and twenty minutes to complete the exam, be certain to watch the clock and use your time wisely. Answer questions completely but concisely. Including additional incorrect information in an otherwise correct answer may result in a loss of points. As a rough rule of thumb, five points typically take two well-crafted sentences to answer correctly and completely. So a 10-point question typically requires four concise sentences to answer.

You may refer to your notes, the lectures slides, readings and any other materials posted on our course Blackboard site. You may access either printed or electronic versions of these materials. You may not use the internet to search for additional information during the exam and you may not seek the help of any other individuals.

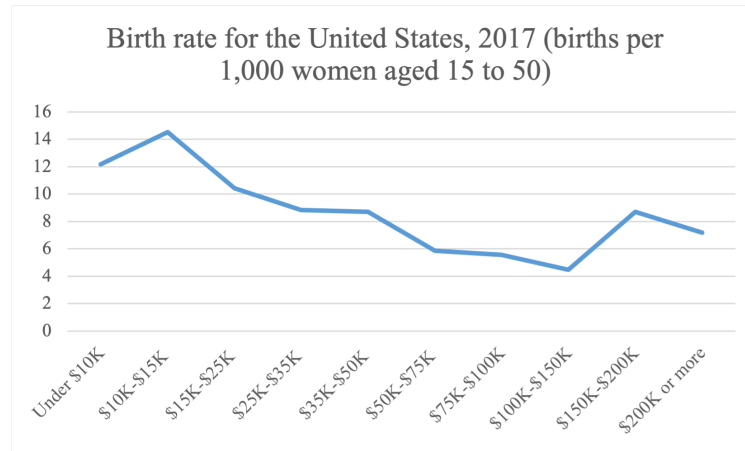Good luck!

Name:

ID Number:

1. (15 points) Economists often think about the impacts of policies in terms of efficiency and equity. Efficiency refers to making total surplus as large as possible. Equity refers to fairly distributing that surplus across groups (consumers, producers, etc.). The Federalist Papers touch on both of these concepts at various points.

    (a) Explain one argument made by Hamilton in the Federalist Papers that focuses on efficiency. Provide three to four sentences summarizing the argument and explaining why it relates to efficiency. You do not need to quote the argument or remember the exact language.

    (b) Explain one argument made by Hamilton in the Federalist Papers that focuses on equity. Provide three to four sentences summarizing the argument and explaining why it relates to equity. You do not need to quote the argument or remember the exact language.

2. (15 points) One of Sawers' (1992) key criticisms of the work of Thomas and others on the burden of the Navigation Acts was that it was being measured in the wrong way. Specifically, thinking about the burden in per capita terms was not particularly useful.

   (a) Provide one reason why measuring the economic burden of the Navigation Acts in per capita terms might understate the importance of economics as a driving force behind independence.

   (b) Describe an alternative measure that would more accurately reflect the importance of economics' role in the movement for independence. Explain how your alternative solves the issues you raised in part (a). This alternative measure should still be a single statistic. You do not need to know if it could actually be calculated given what historical data are available.

   (c) Another potential concern with Thomas' analysis is the need to make assumptions about demand elasticities. Suppose that the actual elasticity of demand for tea in the colonies was larger than Thomas assumed. Would this mean that his calculations under- or overestimated the economic burden of the Navigation Acts? Be certain to fully explain your answer. A graph is not necessary but can be included if it helps you answer the question.

3. (25 points) Tobacco was one of the key enumerated goods under the Navigation Acts. It was in high demand in Europe and could only be grown in the American colonies. Suppose that, due to the addictive nature of tobacco, European demand for tobacco was perfectly inelastic: European consumers would buy the same amount of tobacco even if the price increased substantially.

   (a) On a graph with the quantity of tobacco on the horizontal axis and the price of tobacco on the vertical axis, show the supply curve for colonial tobacco planters under no shipping costs and the European demand curve for tobacco. Label the supply curve S_a and the demand curve D. Explain why each curve is sloped the way it is (e.g., why a curve is downward or upward sloping) in one sentence per curve.

   (b) On your graph, show the equilibrium quantity and price of tobacco if colonial planters were allowed to ship directly to European consumers. Label this equilibrium quantity and price T_b and p_b. If you need to include additional curves to find this equilibrium, clearly label the curves.

   (c) Now show the equilibrium quantity and price of tobacco when the Navigation Acts force tobacco to be shipped through England. Label this equilibrium T_c and p_c. If you need to include additional curves to find this equilibrium, clearly label the curves.

   (d) Finally, show the change in European consumer surplus and colonial producer surplus caused by the Navigation Acts on your graph.

4. (20 points) Feir et al. (2014) use several types of evidence to assess the impact of the loss of bison on the standard of living in Native American societies. Consider three of the types of evidence they relied on: cohort size, occupational income scores (the average income associated with occupations listed for individuals in census data), and nighttime light intensity data. For each of these three, explain why it might either over- or underestimate the impact of the slaughter of the bison on standards of living. For each measure, your explanation should be roughly three sentences and only needs to argue in one direction (you can focus on underestimation or overestimation, you don't need to cover both possibilities). Be certain you consider which time period each measure is used for when coming up with your explanations.

5. (25 points) The figure below shows birth rates in the modern United States by household income level based on data from the American Community Survey. In this question we will use this figure to explore the Malthusian model.

Birth rate for the United States, 2017 (births per 1,000 women aged 15 to 50)

(a) In class we focused on birth rate curves that were positively sloped, with more births occurring at higher income levels. The figure above appears to show the opposite pattern. Provide a three- to four-sentence explanation of why this modern pattern does not match the pattern we discussed for historical societies.

(b) Suppose that the other features of the Malthusian model still hold: a downward sloping technology curve and a downward sloping death rate curve. Given the downward sloping birth rate curve above, what will happen to income per capita and population if we have a positive technology shock? Use both graphs and a written explanation to answer the question and be certain to address both the short and long run effects.

(c) Do you expect the slope of the death rate curve to be similar today to what it was in colonial times? Explain your answer in no more than three sentences.

(d) Do you expect the slope of the technology curve to be similar today to what it was in colonial times? Explain your answer in no more than three sentences.