**MIDTERM – VERSION #1**

A total of 100 points are possible.

Last Name: _____________________________ First Name: _____________________________

Your Student ID Number: __ __ __ - __ __ - __ __ __ __

**Part A: Multiple Choice Questions**
(14 questions, each of which is worth 5 points)

**Instructions:** Answer these multiple choice questions on your Scantron. Write on the Scantron your name (last name first), student ID number, and exam version number in the “name,” “subject,” “test no.” boxes respectively. For example,

<table>
<thead>
<tr>
<th>NAME</th>
<th>McComb, Madeline</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUBJECT</td>
<td>530-66-6271</td>
</tr>
<tr>
<td>DATE</td>
<td></td>
</tr>
</tbody>
</table>

**Warning**

If you first fill in an answer and then erase it to fill in a different one, and the first answer is not fully erased, the Scantron reader may detect two answers and not accept either one. Do not fill in an answer till you are sure this is the one you want to give, or you may not receive credit for the question.
1. What is the best approximation to the average age that women first married in Western Europe between 1500 and 1700?
   A. 18
   B. 22
   C. 26
   D. 30
   E. 34

2. The carvel technique of construction was introduced in Europe in the middle ages. What was this innovation?
   A. Use of multiple stories in housing.
   B. Use of external planking of ships just as a skin to keep them watertight.
   C. Introduction of flying buttresses in cathedrals.
   D. Construction of windmills with sails that could be pointed into the wind.
   E. Construction of carts with wider wheels that could navigate rutted roads.

3. What is the best date from drawing a line between the pre-industrial Malthusian economy and the modern economy?
   A. 1650
   B. 1700
   C. 1750
   D. 1800
   E. 1850

4. We know the speed that information would travel at in the Roman Empire because of:
   A. Complaints by contemporaries about poor postal service.
   B. Delays in newspapers on reporting events on the Empire’s frontier.
   C. The practice of writing both the date and the name of the Emperor on legal documents.
   D. Estimates of the speed of sailing ships in the Mediterranian.
   E. Modern experiments with the speed of Roman chariots.

5. The climate of Europe is supposed to have been very warm in the years 1200-1350. Assuming this raised yields in agriculture, what would the effect have been on wages and population in the long run, assuming that fertility behavior did not change.
   A. Both increase.
   B. Both stay the same.
   C. Population increases, wages stay the same.
   D. Population stays the same, wages increase.
   E. Population decreases, wages increase.
6. The best measure of the level of technological advance of economies before 1800 is:

A. The population density.
B. The percentage of the population living in cities.
C. Life expectancy.
D. Real wages.
E. The average age of marriage.

7. Which of the following was NOT a characteristic of the European marriage pattern?

A. Low levels of illegitimacy.
B. Unrestricted fertility within marriage.
C. Late average age of marriage.
D. No women marrying before age 20.
E. Large percentage of women never marrying.

8. Which of the following countries did NOT exhibit the European marriage pattern in 1700.

A. Spain
B. Italy
C. Sweden
D. England
E. Russia

9. The Postan Thesis is that:

A. Yields were low in medieval European agriculture because of excessive grain cultivation
B. Women married late in Europe as a way to avoid fertility.
C. Women married late in medieval Europe as a result of social pressures.
D. Yields were low medieval European agriculture because weeds adapted to the crop rotations.
E. Yields were low medieval European agriculture because of the Interglacial Climate Maximum.

10. Income per capita between the richest and poorest countries in the world in 1800 varied by a factor of about

A. 3 to 1
B. 10 to 1
C. 12 to 1
D. 15 to 1
E. 25 to 1
11. What is the long run effect of a tax on wages (to fund the monarch) in a Malthusian economy?

A. Death rates and birth rates increase, and the population falls.
B. Death rates and birth rates increase, and the population increases.
C. Death rates increase, birth rates decline and the population falls.
D. Death rates decline, birth rates decline and the population falls.
E. **Death rates and birth rates stay the same, the population falls.**

12. We know that the peoples of the America’s were much less technologically advanced than the invading Europeans circa 1500 because

A. Mayan pyramids were very similar to those of the Ancient Egyptians
B. The Aztecs practiced human sacrifice
C. Cortez and a small band of Spaniards were able to conquer the entire Aztec Empire in 1519
D. **There were only about 25 million people in the whole of the Americas in 1492.**
E. The Incas had no written language

13. Suppose that in an economy output is growing at 3%, the capital stock is growing at 4%, the labor supply is growing at 2%, the land supply is fixed and the share of capital, labor and land in national income are respectively 1/3, 1/3, and 1/3. What is the rate of growth of output per acre?

A. 0%
B. 1%
C. 2%
D. **3%**
E. 4%

14. If the growth rates and shares are as in the previous question what is the growth rate of efficiency?

A. 0%
B. **1%**
C. 2%
D. 3%
E. 4%
Part B: LONG ANSWERS

1. Explain why urbanization should be a good indicator of the real income per person in a society. What do urbanization figures suggest about economic growth in Europe between 1300 and 1700? Is this evidence consistent with our suggestion that Europe was a Malthusian economy before 1800? (15)
2. What is the formula relating productivity growth to the growth rates of output and input quantities. Show from this how to estimate the rate of efficiency growth in an economy from the rates of growth of output and input prices. Be careful to state any assumptions used. (15 points)