SECOND MIDTERM – VERSION #1

A total of 100 points are possible.

Last Name: _____________________________ First Name: ________________________

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

** Part A: Multiple Choice Questions **
(18 questions, each of which is worth 4 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>
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<tbody>
<tr>
<td>SUBJECT</td>
<td>530-66-6271</td>
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<tr>
<td>TEST NO.</td>
<td>1 or 2</td>
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<tr>
<td>DATE</td>
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<td>HOUR</td>
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** 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. The “Enclosure Movement” of 1760 and later was

A. The replacement of the open highway by private turnpikes that people had to pay to use.
B. The confining of previously free workers to factories in the Industrial Revolution.
C. The replacement of communal land rights in England by purely private land tenure.
D. The system of controls to prevent the export of new technology from England.
E. The British military strategy leading to the defeat of Napoleon in 1815.

2. We believe Britain had higher income per capita than India in 1800 because we believe:

A. Britain had a secure political system with stable property rights.
B. Britain already had more advanced technology.
C. Capital was cheaper in Britain.
D. Britain had a lower birth rate.
E. Britain had more easily exploitable coal.

3. In which decade was the Suez canal built?

A. 1840s
B. 1850s
C. 1860s
D. 1870s
E. 1880s

4. Those who take an “Evolutionary” view of the Industrial Revolution in Britain argue that:

A. Not much really happened between 1760 and 1860.
B. The Netherlands saw the first Industrial Revolution in the years 1550-1650.
C. Growth rates were much slower in the Industrial Revolution than in the twentieth century.
D. Technology develops through natural selection mechanisms.
E. Given the state of the British economy and society in 1760 the Industrial Revolution was at least highly likely to occur.

5. We know there cannot have been an Agricultural Revolution alongside the Industrial Revolution because:

A. Input prices in agriculture rose little relative to output prices.
B. Yields of crops rose little over these years.
C. There were very few mechanical innovations.
D. The people such as Jethro Tull who were famous innovators in agriculture had crazy ideas.
E. The number of workers in the agricultural sector did not decline between 1760 and 1860.
6. Which sector of the economy contributed most to productivity growth in the Industrial Revolution?
   A. Cotton textiles
   B. Railways
   C. Coal mining
   D. Steam power
   E. Iron and Steel

7. The profit rates of cotton textile firms in the Industrial Revolution period were about 10%, the same as the average commercial or industrial enterprise at that time. This shows that:
   A. There was really little technical change in cotton textiles.
   B. The workers got all the benefits from technical innovation.
   C. The management of firms did not keep pace with technological advances.
   D. The raw cotton producers got all the benefits.
   E. Technical gains by individual firms were copied quickly by their competitors without any compensation to the innovators.

8. Suppose that prices of cotton yarn fell at 2% per year between 1770 and 1820, while the cost of capital rose by 1% per year and the cost of labor by 2%. The rate of productivity growth in the industry if capital and wages were each 50% of costs was
   A. 1.5%
   B. 3%
   C. 3.5%
   D. 4.5%
   E. 5%

9. If a woman married at age 20 in Germany in the seventeenth century on average she would have given birth to how many children by age 45?
   A. 2
   B. 4
   C. 8
   D. 12
   E. 16

10. Suppose that a census of ages of some population shows 32% of the ages ending in a 0 or a 5. What fraction of the population is likely illiterate?
    A. 12%
    B. 15%
    C. 16%
    D. 22%
    E. 32%
11. What features tended to characterize innovators in Britain in the Industrial Revolution period?

A. They were generally short, pugnacious men.
B. They mostly profited greatly from their innovations.
C. They were mostly trained in universities.
D. They were generally illiterate.
E. They tended to come from non-conformist religious groups.

12. What is the odd name in the following list?

A. Newcomen
B. Cartwright
C. Arkwright
D. Hargreaves
E. Kay

13. Which of the following is not a formula for productivity growth estimated from prices

A. \( g_A = \alpha g_r + \beta g_w + \gamma g_s - g_p \)
B. \( g_A = \alpha g_r + \beta g_w + \gamma g_s - (\alpha + \beta + \gamma) g_p \)
C. \( g_A = \alpha (g_r - g_p) + \beta (g_w - g_p) + \gamma (g_s - g_p) \)
D. \( g_A = \alpha g_r/p + \beta g_w/p + \gamma g_s/p \)
E. \( g_A = \alpha g_r + \beta g_w + \gamma g_s \)

14. What is the most plausible number for the income elasticity of demand for food in the Industrial Revolution period?

A. 0
B. .3
C. .6
D. 1
E. 1.2
15. Manufactured exports from Britain rose greatly in the Industrial Revolution period mainly because of

A. Rapid population growth  
B. Technological advances in cotton textiles  
C. British success in the wars against the French  
D. The decline of the Dutch economy  
E. Technological advances in agriculture

16. The last major reform of the British Patent system prior to the Industrial Revolution was in

A. 1560  
B. 1603  
C. 1625  
D. 1689  
E. 1760

17. From greatest to smallest, the United Kingdom, the United States, Russia, Germany, and China ranked in terms of industrial output per capita in 1910

A. US, UK, Germany, Russia, China  
B. US, UK, Germany, China, Russia  
C. UK, US, Germany, Russia, China  
D. UK, US, Germany, China, Russia  
E. US, Germany, UK, Russia, China

18. Which of the following countries had the cheapest sources of capital in developing its railway system in the late nineteenth century?

A. USA  
B. Mexico  
C. Brazil  
D. India  
E. Argentina
Part B: LONG ANSWER

1. Explain why it seemed inevitable by 1860 that industrialization and economic development would soon spread from Britain to many of the world's poorest countries. (28 points)