Exam 1

Code name:  ____________________________ (0.5 pts)

Part 1: Short Answer / Multiple Choice (67.5 points)

Answer this section on this exam, not in your bluebook. Each question is worth 2.5 points unless otherwise noted.

1. ______ Which of the following thinkers is most (i.e. first) responsible for introducing the “contract theory” of government?
   a. Milton Friedman
   b. David Hume
   c. John Locke
   d. Karl Marx
   e. Frederich Nietzsche
   f. Vilfredo Pareto
   g. Ayn Rand
   h. John Rawls
   i. Harvey Rosen
   j. Adam Smith

2. ______ Consider the following statement: “Of course Japan and China will fight over fishing rights in the Sea of Japan. Anytime there is a valuable resource, entities, be they people, animals, or governments, will compete for it.” Which of the following best describes the writer’s view of government?
   a. Darwinistic
   b. Mechanistic
   c. Nietzscheistic
   d. Occidental
   e. Organic
   f. Oriental
   g. Western
   h. both d & g

3. ______ What is one of the primary effects of the “general welfare clause” of the U.S. Constitution?
   a. The federal government has explicit authority to conduct income redistribution policies.
   b. Income redistribution policies are explicitly reserved to the state governments.
   c. The provision of “public goods” is exclusively reserved to the federal government.
   d. The provision of “public goods” is exclusively reserved to state governments.
   e. The power and scope of the federal government has been able to expand greatly.
   f. More powers than otherwise has been reserved for state governments.
   g. Individuals can, in effect, veto majority rule if it is found to negatively affect their person or property.

4. ______ What is one of the primary effects of the “interstate commerce clause” of the U.S. Constitution?
   a. The federal government has explicit authority to conduct income redistribution policies.
   b. Income redistribution policies are explicitly reserved to the state governments.
   c. The provision of “public goods” is exclusively reserved to the federal government.
   d. The provision of “public goods” is exclusively reserved to state governments.
   e. The power and scope of the federal government has been able to expand greatly.
   f. More powers than otherwise has been reserved for state governments.
   g. Individuals can, in effect, veto majority rule if it is found to negatively affect their person or property.
5. ______ What is one of the primary effects of the 1st amendment to the U.S. Constitution?
   a. The federal government has explicit authority to conduct income redistribution policies.
   b. Income redistribution policies are explicitly reserved to the state governments.
   c. The provision of “public goods” is exclusively reserved to the federal government.
   d. The provision of “public goods” is exclusively reserved to state governments.
   e. The power and scope of the federal government has been able to expand greatly.
   f. More powers than otherwise has been reserved for state governments.
   g. Individuals can, in effect, veto majority rule if it is found to negatively affect their person or property.

6. ______ Just how important are personal income taxes to the federal government? What % of federal government revenues come from personal income taxes?
   a. 15%  
   b. 33%  
   c. 50%  
   d. 75%  
   e. 90%  

7. ______ Just how important are payroll (FICA, i.e. taxes for Social Security and Medicare/Caid)e taxes to the federal government? What % of federal government revenues come from payroll taxes?
   a. 15%  
   b. 33%  
   c. 50%  
   d. 75%  
   e. 90%  

8. ______ Social Security is sure getting a lot of press. Just how big of a program is Social Security. What % of federal government spending goes to Social Security?
   a. 4%  
   b. 7%  
   c. 11%  
   d. 18%  
   e. 30%  

9. ______ Yowza! Bush is planning to greatly increase national defense spending. What % of federal government spending currently goes to national defense?
   a. 8%  
   b. 14%  
   c. 20%  
   d. 27%  
   e. 35%  

10. ______ Which is the best measure of the amount of resources our government uses up?
    a. government spending except for transfers  
    GDP  
    b. GDP  
    Population  
    c. all government spending  
    GDP
11. Senator Sonya, is speaking against a federal education bill. The bill calls for increasing the amount the federal government spends on education by 50% (i.e. + 50% of fed. education spending’s current level) and cutting other parts of the budget to pay for it. Sonya states; “The federal government cannot afford such a large increase. I’m simply not willing to cut other programs such as national defense by 50%.” Sonya’s comment:

a. is largely correct. Education generates negative externalities and should be funded by government. National defense does not generate negative externalities.
b. is largely correct. Education generates positive externalities and should be funded by government. National defense does not generate positive externalities.
c. is largely incorrect. National defense would require a cut of much more than 50% to fund the increase.
d. is largely incorrect. National defense would require a cut of much less than 50% to fund the increase.

12. What is the biggest source of revenue for most local governments?

a. general sales taxes
b. sales taxes specific to tourists (ex. motel, rental car taxes)
c. corporate income taxes and franchise fees
d. the personal income tax
e. property taxes

13. How much, if any, did government’s share of the economy grow during the Clinton years? Use all government spending as your measure of government.

a. Government’s share of the economy remained virtually unchanged.
b. Government’s share of the economy decreased.
c. Government’s share of the economy increased.

14. Which of the following is true of regarding government’s share of the economy since 1960?

a. By all measures, government’s share of the economy has increased.
b. All government spending as a % of GDP has increased. However, government spending on goods and services, as a % off GDP, has decreased.
c. All government spending as a % of GDP has decreased. However, government spending on goods and services, as a % off GDP, has increased.
d. By all measures, government’s share of the economy has decreased.

15. Which of the following is true of regarding changes in the composition of government spending in the U.S. since 1960?

a. Federal government spending on federally administered programs has grown while spending by state and local governments has shrunk (as a % of GDP).
b. As a % of GDP, federal government spending on federally administered programs has grown while state and local government spending has remained virtually unchanged (± 0.5%).
c. The biggest change has been the growth of federal funding given to state and local governments.
d. The biggest change has been the reduction (shrinkage) of federal funding given to state and local governments.
16. Jamie is investigating the causes of low educational achievement. He has obtained the latest (2001) data from every school district in the United States. He uses econometrics to estimate the following equation:

\[ \% \text{HS Seniors Graduating} = \alpha + B \times \% \text{White} + \varepsilon \]

Where \% White is the \% of a high school’s student who are white according to the Census classification.

The results are shown below.

\[ \% \text{HS Seniors Graduating} = 68\% + .3 \times \% \text{White} + e \]

\[ R^2 = .87 \] (87\% of the differences in grad rates are “explained” by the regression)

F-stat = X.XX (significant at the 99\%+ level)

t-stat for constant (\( \alpha \)) = X.XX (significant at the 99\%+ level)

t-stat for \% White’s B = X.XX (significant at the 99\%+ level)

No. of observations = no. of U.S. high schools = 37,572

Jamie interprets the results as follows; “There is something fundamentally different about white high school teenagers. It may be genetics or culture. That I do not know. The regression results do, however, strongly indicate that ceteris paribus, white students are more likely to graduate than non-white. For example, an 18 year old white male living in a two parent, $60,000 income home, is 30\% more likely to graduate than an 18 year old non-white male living in a two parent, $60,000 income home.”

Which of the following best describes the main error Jamie made in his positive analysis?

- a. Jamie made no fundamental errors. Whether we like them or not, the regression results speak for themselves.
- b. Culture is something which cannot be quantified. Jamie violated the “Pareto principle”.
- c. Jamie’s regression should have included fewer school districts (ex. those from only one state).
- d. Jamie’s regression should have included more school districts (ex. those from other nations).
- e. Jamie’s regression should have included more explanatory variables than just \%White.
- f. Jamie’s regression only explains 87\% of the variation in graduation rates unexplained. This is not high to claim statistical significance.

17. A principles of economics text lists the following reasons/rationales for government intervention:

1) establish & enforce property rights
2) deal with and prevent situations in which markets result in a lack of competition
3) provide for public goods
4) correct for externalities
5) correct for asymmetric information and other information problems
6) promote macroeconomic stability
7) promote economic growth

What major reason/rationale for government did the authors forget?
18. Assume that Zeus’s MRS = \( \frac{4 \text{ Sodas}}{1 \text{ Pizza}} \). Hera’s MRS = \( \frac{6 \text{ Sodas}}{1 \text{ Pizza}} \). The current situation is:
   a. not Pareto efficient. To achieve Pareto efficiency Zeus should trade soda to Hera in exchange for pizza.
   b. not Pareto efficient. To achieve Pareto efficiency Zeus should trade pizza to Hera in exchange for soda.
   c. not Pareto efficient. To achieve Pareto efficiency Zeus should give both soda and pizza to Hera.
   d. not Pareto efficient. To achieve Pareto efficiency Hera should give both soda and pizza to Zeus.
   e. pareto efficient

19. Assume that Zeus’s \( \text{MU}_{\text{Soda}} \) (marginal utility from soda) = 15 utils. Zeus’s \( \text{MU}_{\text{Pizza}} \) (marginal utility from soda) = 45 utils. Hera’s \( \text{MU}_{\text{Soda}} \) (marginal utility from soda) = 12 utils. Hera’s \( \text{MU}_{\text{Pizza}} \) (marginal utility from soda) = 4 utils.

   The current situation is:
   a. not Pareto efficient. To achieve Pareto efficiency Zeus should trade soda to Hera in exchange for pizza.
   b. not Pareto efficient. To achieve Pareto efficiency Zeus should trade pizza to Hera in exchange for soda.
   c. not Pareto efficient. To achieve Pareto efficiency Zeus should give both soda and pizza to Hera.
   d. not Pareto efficient. To achieve Pareto efficiency Hera should give both soda and pizza to Zeus.
   e. pareto efficient

20. Assume that MRT for all producers = \( \frac{8 \text{ Sodas}}{1 \text{ Pizza}} \). MRS for all consumers = \( \frac{6 \text{ Sodas}}{1 \text{ Pizza}} \).

   The current situation is:
   a. not Pareto efficient. Producers would tend to make more pizza and less soda. Consumers would tend to buy more pizza and less soda.
   b. not Pareto efficient. Producers would tend to make more pizza and less soda. Consumers would tend to buy less pizza and more soda.
   c. not Pareto efficient. Producers would tend to make less pizza and more soda. Consumers would tend to buy more pizza and less soda.
   d. not Pareto efficient. Producers would tend to make less pizza and more soda. Consumers would tend to buy less pizza and more soda.
   e. pareto efficient
21. **Assume that the marginal cost of producing a pizza is $9.** The marginal cost of producing a soda is $3 for all producers. MRS for all consumers = \frac{5 \text{ Sodas}}{1 \text{Pizza}}. The current situation is:

a. **not Pareto efficient.** Producers would tend to make more pizza and less soda. Consumers would tend to buy more pizza and less soda.

b. not Pareto efficient. Producers would tend to make more pizza and less soda. Consumers would tend to buy less pizza and more soda.

c. not Pareto efficient. Producers would tend to make less pizza and more soda. Consumers would tend to buy more pizza and less soda.

d. not Pareto efficient. Producers would tend to make less pizza and more soda. Consumers would tend to buy less pizza and more soda.

e. **pareto efficient**

22. **Indicate ✓) whether each good is, or is not, a example of a public good as defined in this class. (10 pts)**

<table>
<thead>
<tr>
<th>Public Good</th>
<th>Not a Public Good</th>
<th>Good</th>
</tr>
</thead>
<tbody>
<tr>
<td>In World War II, the British government distributed gas masks to the general public. These masks were to be used in case of a German (bomber) gas attack.</td>
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<tr>
<td>In World War II, the British government flew fighter airplanes to shoot down German V-1 missiles. If not intercepted, these missiles would have exploded on some part of England. The missile’s target could not be known ahead of time.</td>
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<tr>
<td>NaviStar is a series of satellites launched by the U.S. government. It provides global positioning, i.e. information about where one is, to ships which buy a receiver from the government.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PrivaStar is a series of satellites launched by the a private U.S. company. It provides global positioning, i.e. information about where one is, to ships which buy a receiver from the company.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The city of Houston provides curb-side garbage service to its residents.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B&amp;F, and C&amp;G, and D&amp;H, all private companies, provides curb-side garbage service to a city’s residents. Residents are free to purchase the service or not purchase the service. There is no legal requirement to have garbage service.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B&amp;F, and C&amp;G, and D&amp;H, all private companies, provides curb-side garbage service to a city’s residents. Residents must purchase garbage service from one of the companies. There is a legal requirement to have garbage service.</td>
<td></td>
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</tr>
<tr>
<td>a library book at the TCU library</td>
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<tr>
<td>a library book at the Tarrant county public library</td>
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</table>
Part 2: Short Essay (32 points)
Answer 1 of the following 2 Questions in your bluebook.

23. Consider the following 2 good, 2 person, one sushi joint world in which production is fixed. The two people are Wilma and Betty. The two goods are Tea and Sushi. There is a fixed amount of each good. This amount is already on the table. No more is coming. The two individuals have the Tea and Sushi divvied up (i.e. there will be no unconsumed Tea or Sushi), on their placemats and ready to eat. There are no externalities involved in the consumption of either good. Both people act competitively (i.e. there is no market power). Currently, the Tea and Sushi are divvied up such that, if each person eats what’s on her respective placemat, their marginal utilities will as shown below. Their present quantities are also listed.

\[
\begin{align*}
Q_{\text{Tea}}^{\text{Wilma}} &= 4 \text{ cups} & MU_{\text{Tea}}^{\text{Wilma}} &= 10 \text{ utils} \\
Q_{\text{Sushi}}^{\text{Wilma}} &= 12 \text{ pieces} & MU_{\text{Sushi}}^{\text{Wilma}} &= 20 \text{ utils} \\
Q_{\text{Tea}}^{\text{Betty}} &= 6 \text{ cups} & MU_{\text{Tea}}^{\text{Betty}} &= 5 \text{ utils} \\
Q_{\text{Sushi}}^{\text{Betty}} &= 12 \text{ pieces} & MU_{\text{Sushi}}^{\text{Betty}} &= 40 \text{ utils}
\end{align*}
\]

a) What is each person’s Marginal Rate of Substitution (MRS)\(_{T,S}\)? Make sure you explicitly indicate the units you are using (\(\text{Tea/Sushi}\) or \(\text{Sushi/Tea}\)).

b) Is the current situation Pareto Efficient? Explain why this is. If there is not enough information to answer this situation, tell me what missing information you need and why you need it.

c) Illustrate the current situation with an Edgeworth box. Use the graph on the next page to do this. Label as much as you can, including values. For instance, tell me what the slopes of the curves mean, as well as what they are at each person’s consumption point.

d) Assume there are zero transactions costs to trading. Assume Wilma and Betty each care only about their own utility, not the other person’s. What will Wilma and Betty tend to do? Why? Illustrate this with numbers. i.e. What’s happening to their MU’s, and MRS’s as they trade? Show this move (if there is a move) in your Edgeworth box. If there is no move, briefly explain why.

24. Welcome to Survivor XXIV, Clones of Famous Dead Thinkers edition! Yes, this time CBS has cloned three famous dead thinkers, \textbf{Frederich Nietzsche}, \textbf{Vilfredo Pareto}, and \textbf{John Rawls}, and put them on a deserted island. The first thing our trio must figure out is how to divide up the food they came with (and they will produce in the future). Each believes strongly in the philosophy espoused by their original.

a) Explain the distribution system each thinker would, based on their prior writings, espouse. If necessary, use an example(s) to clarify the system.

b) Describe the weaknesses, if any, of each system. If necessary, use an example(s) to clarify this.