Write your name on the cover of the test booklet and nowhere else. Enclose this sheet with the booklet. Failure to follow these directions will cost you 1 point. The test has 150 points (to be scaled up to 230 points) and is scheduled to take 75 minutes (but you can take the full 2 hours.) Therefore, expect to spend 1 minute for every 2 points. For example, a 10-point question should take 5 minutes.

1) (10 points) For EITHER the asymmetric information problem in Part A OR the asymmetric information problem in Part B, define it and briefly explain how it could cause an inefficiency.
A) Moral hazard
B) Lemons problem

2) (12 points) Answer EITHER Part A OR Part B.
A) What is the equation for *trade efficiency*, i.e., there are no possible trades which make one party better off without making the other one worse off? Explain why that equation makes sense.
B) What is the equation for *technical efficiency*, i.e., we are using the correct inputs? Explain why that equation makes sense.

3) (14 points) Answer EITHER Part A OR Part B.
A) In the CAPM model, what does β measure? What do you think the value of it is for Conagra Brands. (Conagra is the largest food producer in the USA.) Explain your logic.
B) Would a new pandemic like COVID-19 be a diversifiable or a non-diversifiable risk for a health insurance company. Explain your logic. What would be an example of the other type of risk? State how that fits the definition

4) (14 points) Answer EITHER Part A OR Part B.
A) The last time Bethany College hired an Economics Professor, we had 230 candidates. If you had been one of the 230 candidates, what could you have done to signal you were serious about wanting to work at Bethany College and/or you are a hard worker? Explain how that action would send that signal. I am looking for more than just getting a Ph.D.
B) Some people have proposed that the CEO of a company should get shares of stock which cannot be sold for at least 10 years. What is the problem they are trying to reduce? How would it reduce the problem?

5) (14 points) Answer EITHER Part A OR Part B.
A) The equation, for a stock externality like greenhouse grasses, is $S_t = E_t + (1-\delta)S_{t-1}$. Explain what that means and why it takes that form.
B) When there is a stock externality, when is it more profitable to abate the externality? Is it more likely to be profitable where there is a high or low dissipation rate? Explain your logic. Is it more likely to be profitable where there is a high or low discount rate? Explain your logic.

6) (16 points) Answer EITHER Part A OR PART B.
A) Draw two different individual demand curves for a public good. Find the combined demand. Explain why you added them in the manner you drew. Draw the MC curve and find the equilibrium.
B) There is a lot of drilling going on in this area. According to the Coase Theorem, what proof do we have that this is the correct amount of drilling? What are potential problems with this logic?

7) (20 points) Answer EITHER Part A OR Part B.
A) Draw the MCA/MEC diagram where two companies have different costs of abatement. In this case, which is better, a fee for polluting or a standard limiting the amount of pollution? Explain your logic using the graph.
B) Draw the D/MC/MEB diagram for a consumer who is buying a good which creates a positive externality. Use it to prove the economy will not produce the optimal amount if left to itself.

8) (24 points) Answer EITHER Part A OR Part B.
A) Draw the Edgeworth-Bowley Box for two people getting tea and coffee. Draw at least three indifference curves for each person and the contract curve. Find a point off of the contract curve where the person on the upper-right corner gets ¾ of the tea and ¼ of the coffee. Prove the point is not Pareto Optimal.
B) Draw the Edgeworth-Bowley Box for two people getting aspirin and ibuprofen. Draw at least three indifference curves for each person and the contract curve. Explain why the indifference curves for the person in the upper-right corner look as drawn. Give me economics, not mathematics.

9) (26 points) Answer EITHER Part A OR Part B.
A) Draw a PPF/indifference curve diagram such that the country is importing pens (on the horizontal axis) and exporting telephones (on the vertical axis). Have the world price be $P_P/P_T = ½$. Explain how your graph shows the imports, exports, and world price. How can the country consume outside of the PPF?
B) Draw the S/D diagram for good used cars and beside it the S/D for bad used cars. Show the initial situation if people cannot tell *a priori* which is which. Explain why the curves move and where they end up eventually. You only need to draw the final lines, not the intermediate steps. Why is the final spot where you put it?