Benefit-Cost Analysis **Exam 1** **10-9-2020**

NAME:

Instructions

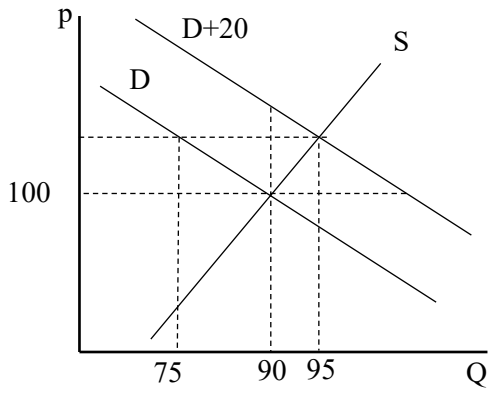
i. Indicate your name above.
ii. Answer all six questions in the space provided.
iii. Show and explain your work.
iv. Be neat and concise.
v. List and explain any assumptions you make.
vi. You may use any resources at your disposal other than speaking or otherwise communicating with anyone else.
vii. Keep your camera, microphone, and speakers on for proctoring and for test related communications.
viii. Upload an electronic copy of your work to canvas by 3:00 PM.

1) What is the difference between Pareto efficiency and Hicks-Kaldor efficiency, and why is it relevant to benefit cost analysis?

2) Why are benefit cost ratios inappropriate for evaluating alternative projects?

3) Suppose your company is preparing a benefit-cost analysis to use to lobby the local government for a policy you want passed. Why would you want to know if the relevant decision makers are guardians or spenders?

4) A government project directly provides 20 units in a local market. The METB is 0.2. The elasticity of demand is -2/3. Other pertinent information is summarized in the figure provided. Calculate the changes in PS, CS, GS, and SS associated with the purchase.



5) Suppose:
i) the price of gasoline is $2 per gallon
ii) current consumption is 400 (million) gallons per day
iii) the elasticity of demand is -0.8
iv) retail provision of gasoline may be approximated as a constant cost industry
v) there is an external cost of $0.5 per gallon of gas.
Calculate deadweight loss associated with the externality. Draw a figure to illustrate.

6) A local government project requires 30 workers for a year from a market in which currently 100 workers are employed, 50 are unemployed, and the annual wage is $40K. The MEBT is 0.2.
a) Draw a figure illustrating the state of the market.
b) Calculate the opportunity cost of hiring the workers.