1. NCHart is a corporation that has developed and patented a new drug to treat heart disease. There are no substitutes for this drug, giving NCHart a monopoly.

(b) At Q_m from part (a)(i), is demand elastic, unit elastic, or inelastic? Explain using information from the graph.

(c) Instead of maximizing profit, suppose NCHart considers providing the new drug to as many patients as possible as long as it can generate enough revenue to cover its total costs.

(i) On your graph from part (a), show the quantity that is consistent with this goal, labeled Q_z.

(ii) At Q_z from part (c)(i), is there a deadweight loss? Explain.

(d) NCHart's patent expires next year, and a new firm, TXDrug, is considering whether to Enter this market or Stay Out. NCHart can either produce Q_m or Q_z. The firms independently and simultaneously choose their actions. The first entry in the payoff matrix represents NCHart's payoff and the second entry represents TXDrug's payoff. Both firms have complete information. Use the payoff matrix below to answer the following questions.

		TXDrug	
		Stay Out	Enter
NCHart	Q_m	\$10, \$0	\$4, \$1
	Q_z	\$0, \$0	–\$2, –\$1

(i) Does TXDrug have a dominant strategy? Explain using strategies and payoffs from the payoff matrix.

(ii) What is the best response for NCHart if TXDrug chooses to Stay Out?

(iii) Identify the Nash equilibrium.

Begin your response to this question at the top of a new page in the separate Free Response booklet and fill in the appropriate circle at the top of each page to indicate the question number.