This exam is about government regulation of child day care centers. In general, we can group day care centers into two groups: certified and noncertified. Noncertified day care centers are small and are subject to minimal state government regulation. Certified day care centers are large and must satisfy regulations having to do with staff/child ratios, food quality, available space, etc. Your assignment is to measure the effect of state government regulations on the provision of child care.

1) Your first job is to measure the “production function” for certified and noncertified day care centers. Choose a reasonable “output,” and describe a reasonable set of cross-section data to estimate your production functions. Provide details on the problems associated with estimation and how you intend to deal with them. Do not worry about the implications of question (3) in answering this question.

2) Your second job is to estimate the demand for day care centers of different types. A day care center is characterized by a vector of quality characteristics such as those described above, whether it has a religious affiliation, and its cost. You are given a cross-section of families. For each family, you observe characteristics of the family, characteristics of the kid potentially needing day care, and the characteristics of the day care choice of the family. In many families, you observe one of the parents providing care. Describe how to estimate a model of demand for different types of day care. Provide details about the estimation issues and how you address them. Do not worry about the implications of question (3) in answering this question.

3) A quick look at the data on characteristics of certified day care centers leads one to the conclusion that there are many day care centers providing exactly the minimum characteristics required by state regulation and very few providing better care. How does this fact affect your answers in questions (1) and (2)?

4) Given your estimates, suggest how to simulate a relaxation of state government regulations. Be precise, and provide details.