Information Economics, Spring 2018
Pre-lecture Problems for Lecture 9

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Note. The deadline of submitting the pre-lecture problem is ***9:30am, May 18***. Please submit a hard copy of your work to the instructor in class. Late submissions will not be accepted. Each student must submit her/his individual work. Submit ONLY the problem that counts for grades.

1. (0 points) Suppose that the vendor with reliability r_i is selling to a non-public hospital under no information asymmetry. Prove that the vendor may earn $(p_0 - c)r_iK$ in equilibrium regardless of the contract type she chooses.
2. (0 points) Suppose that the vendor with reliability r_i is selling to a for-profit hospital under no information asymmetry. Prove that the hospital will earn some rent under a revenue-sharing contract in equilibrium.
3. (10 points) Suppose that the vendor with reliability r_i is selling to a non-profit hospital under information asymmetry.
   (a) (4 points) Your friend claims that there is a separating equilibrium in which the reliable vendor offers a fixed fee $(p_0 - c)r_HK$ while the unreliable one offers a fixed fee $(p_0 - c)r_LK$. Prove or disprove this claim.
   (b) (3 points) Your friend claims that there is a pooling equilibrium in which both vendors offer a fixed fee $(p_0 - c)r_HK$. Prove or disprove this claim.
   (c) (3 points) Your friend claims that there is a pooling equilibrium in which both vendors offer a per-treatment fee $p_0 - c$. Prove or disprove this claim.