LPS ECON-103-601, Fall 2014
Quiz 11.12.14 Name: _____

Show all work clearly and in order. Circle or box your final answer but points will be awarded based on a correct solution. A solution should always justify the steps taken and explain the assumptions needed to reach a final answer (e.g. how do you know you are not dividing by zero in the last step?).

Q1

Consider the regression specified as $y_i = \alpha + \varepsilon_i$ where $\varepsilon_i \sim i.i.d.F(\varepsilon_i)$, $\mathbb{E}[\varepsilon_i] = 0$ and $i = 1, ..., n$.

(a) Write down the ordinary least squares (OLS) minimisation problem.

(b) Write down the FOC for $\hat{\alpha}_{OLS}$.

(c) Write down the SOC for $\hat{\alpha}_{OLS}$.

(d) Derive the OLS estimator for α.