

**Question 5**

Assume that the binary variable  $y$  follows a linear probability model.

- (a) Write down the log-likelihood function for observation  $i$ .
- (b) Why might maximum likelihood estimation of the LPM be difficult?
- (c) Assuming that you can estimate the LPM by LME, explain why it is valid, as a model selection device, to compare from the LPM with that from logit or probit.