

3. COL703: Major-Q3 10:10-10:35, late submission accepted till 10:40, 5+6 = 11 marks

Let Σ be a signature containing at least one constant symbol c . Construct an example of a set Φ containing at least two closed first-order formulae such that the following conditions are satisfied.

- (a) Φ has a model (specify the model), but
- (b) Φ has no Herbrand model, unless there are at least two constant symbols.