

LGIC 010 & PHIL 005

Problem Set 2

Spring Term, 2012

1. (25 points) Is there a list of 7 schemata involving only the sentence letters “ p ” and “ q ” such that no schema on the list implies any other schema on the list?
2. (25 points) How long a list of truth-functional schemata involving only the sentence letters “ p ,” “ q ,” and “ r ” can you write down so that no two schemata on the list are equivalent and every schema on the list is implied by “ $(p \oplus q) \oplus r$ ”?
3. (25 points) How long a list of truth-functional schemata involving only the sentence letters “ p ,” “ q ,” “ r ,” and “ s ” can you write down so that each schema on the list implies, but is not implied by, the schema following it?
4. (25 points) How long a list of truth-functional schemata involving only the sentence letters “ p ” and “ q ” can you write down so that no two schemata on the list are equivalent and each schema on the list neither implies nor is implied by “ $p \oplus q$ ”?