

## Basic Examination: Measure and Integration | August 2016

This test is **closed book**: no notes or other aids are permitted.

You have 3 hours. The exam has a total of 5 questions and 100 points (20 each).

You may use without proof *standard* results from the syllabus which are independent of the question asked, unless explicitly instructed otherwise. You must, however, **clearly** state the result you are using.

Below, if not stated explicitly,  $(X; F; \mu)$  is a measure space,  $L_p = L_p(X; F; \mu)$  is the standard  $L_p$  space ( $p \geq 1$ );