Part III Category Theory
Background for the examination
(academic year 2000–2001)

No knowledge of the following topics will be required for the examination:

- homotopy, homology, compact spaces, Hausdorff spaces, connected spaces
- sheaves, manifolds
- modules over a ring, Lie algebras, associative algebras
- linear representations of a group.

That much is guaranteed.

In setting the exam I *will* assume knowledge of the following things, but beware that the list below is not meant to be inclusive—that is, there may be pieces of mathematics which do not appear below but do appear in the exam. (Conversely, of course, not all the topics listed below will necessarily appear in the exam.)

- The definition and basic properties of the category **Top**; presheaves on a space
- the definition and basic properties of the categories **Ab**, **Vect**, **Ring**, **Field**, and **Gp**
- everything I've told you about ordered sets.

Also, I will consider it fair to set in an exam question anything from the 'standard questions' on the example sheets.

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