Definitions to memorize.

1. Sets relations and functions.

$\cup\mathcal{A}$ and $\cap\mathcal{A}$ where $\mathcal{A}$ is a family of sets.
A family of sets is **disjointed**.
The definition of a **relation**. $r \circ s$, $r|A$, $r[A]$ where r, s are relations and A is a set.
Cartesian product.
The definition of an **equivalence relation on** a set.
Partial, linear and well ordering.
Greatest lower bound and **least upper bound**.
The definition of an **interval**.
The definition of a **function**.

2. Initial segments, well ordering and the Axiom of Choice.

The definition of an **initial segment**.

3. The natural numbers and arithmetic.

The definitions of **finite, infinite, countable** and **uncountable**.

4. Introduction to the theory of infinite sets.

5. The real numbers.

The definition of **absolute value**. (Make sure you understand the context.)
Completely ordered field.
Dedekind cut.
The **limit** of a sequence of real numbers.
liminf and **limsup** of a sequence of real numbers.

6. Topology.

Topological space. **Open** and **closed** sets.
The definition of **interior**, **closure** and **boundary**.
The definition of **accumulation point** and **isolated point**.
The definition of **connectedness**. (Ouch!)
The definition of **compactness**.
The definition of **continuous**. (**Definition 1.14.**)
The definition of **limit**. (**Definition 1.15.**)