

## THE MATRICULATION EXAMINATION

In a limited range of subjects a matriculation examination is held in Trinity College every year usually in April. A detailed timetable is sent to candidates a fortnight before the examination.

### **Admission requirements**

The subjects of the matriculation examination are biblical studies and geology. Candidates may take one or both subjects.

The examination is graded in terms equivalent to the grades used in the higher Leaving Certificate examination papers.

Intending candidates must complete and send to the Admissions Office a matriculation examination application form, and the non-returnable fee of €98, together with the completed fee-payment form, not later than 1 March. It is the responsibility of applicants to ensure that the completed forms and fee payment reach the Admissions Office by the prescribed closing date. Late applications will not be accepted under any circumstances. All candidates are notified of their results by post.

One 3-hour paper is set in each subject.

*Syllabus for April 2012 only*

### **Biblical studies**

The paper comprises two sections. Candidates should attempt both sections as outlined below.

#### SECTION A. OLD TESTAMENT

Either

I The history of Israel up to and including the Babylonian exile. Particular attention should be given to the origins of Israel, the rise of the monarchy, the fall of Samaria and the impact of the exile.

or

II Old Testament literature:

(a) Narrative: the Joseph story (*Genesis 37-48*)

(b) Poetry: the Book of Amos

(c) Wisdom: the Book of Job

#### SECTION B. NEW TESTAMENT

Either

I The history of early Christianity in the first century. Particular attention should be given to the Jewish and Hellenistic environment, Jesus and his movement in Palestine and developments up to the destruction of the temple in 70 A.D.

or

II Early Christian literature:

(a) Narrative: Acts of the Apostles

(b) Gospels: Mark's Gospel

(c) Letters: First Corinthians

The biblical text used will be the *Revised Standard Version*. Further information, past papers and suggested reading can be found on the department's website at [http://www.tcd.ie/Religions\\_Theology/](http://www.tcd.ie/Religions_Theology/).

### **Geology**

The paper will offer a choice of about ten questions from which five must be answered. Candidates will be given credit for citing examples, where relevant, of geological features they have observed in the field. Credit will also be given for appropriate, clear illustrations.

#### GENERAL GEOLOGY

The concept of, and evidence for, the layered structure of the Earth. The theory of plate tectonics and its bearing on the origin of earthquakes, volcanoes, mountain belts, and rift valleys.

### **Admission requirements**

## SURFACE PROCESSES

Weathering and its dependence on climate and rock type. Erosion, transport and deposition in fluvial, marine, aeolian, and glacial environments, with emphasis on the development of the Irish landscape. The features of ancient sedimentary rocks from which their depositional environment and way-up can be inferred. The hydrological cycle

## EARTH MATERIALS

The composition and occurrence of the following minerals, and the diagnostic features sufficient to distinguish between them (without use of a microscope): quartz, feldspar, augite, hornblende, mica, olivine, garnet, calcite, galena, sphalerite, pyrite, chalcopyrite, magnetite, hematite, limonite, malachite, fluorspar, barytes, gypsum, halite

The characteristic features, occurrence and origin of the following common rocks: gabbro, dolerite, basalt, andesite, granite, rhyolite, obsidian, pumice, tuff, agglomerate; gneiss, schist, slate, quartzite, marble, mylonite, hornfels; conglomerate, breccia, sandstone, greywacke, shale, mudstone, limestone, coal, chert. Irish mineral resources. Energy resources

## THE GEOMETRY OF ROCK BODIES

Folds and faults. Cleavage and its relationship to folding. Joints

Candidates should be able to draw and interpret simple block diagrams and maps showing unconformities, dipping strata, folded strata, faulted strata, batholiths, dykes and sills.

## EARTH HISTORY

The principles of radiometric dating of minerals. The subdivision of geological time. The origin and age of the Earth. The law of superposition and the principles of stratigraphic correlation. An outline of the geological history of Ireland and Britain, including periods of orogenesis, major unconformities, and changing environments of sedimentary deposition.

## ANCIENT LIFE

The origin, evolution and extinction of organisms. A broad outline of vertebrate evolution including the appearance of man. Modes of preservation and fossilisation potential of different organisms. Fossils as rock builders and environmental indicators. Corals, brachiopods, molluscs (bivalves, gastropods, cephalopods), echinoderms (echinoids, crinoids), trilobites and graptolites: – those morphological features characterising their taxonomic class and approximate geological age. The use of microfossils in oil exploration.