

National University of Ireland, Galway
OLLSCOIL NA hÉIREANN, GAILLIMH

SUMMER EXAMINATIONS 1999

**2nd SCIENCE
GEOLOGY**

PAPER TWO

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Prof. P.D. Ryan
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Time allowed: Three hours

Answer four questions: **two** from Section A and **two** from Section B.
Allow about 45 minutes for each question.

Please use separate Answer Books for each section.

Illustrate your answers with neat sketches and diagrams where appropriate.

SECTION A

1. Describe the geological events that controlled the evolution of Ireland in the Tertiary period.
2. Briefly discuss the formation and entrapment of hydrocarbons.
3. Outline the potential problems involved in the siting of a nuclear waste repository.
4. What are the principal sedimentary structures formed by water currents? How may these be of use to geologists?

SECTION B

5. How do biases in the fossil record arise?
6. Using trilobites as an example, describe how palaeobiologists reconstruct the life style of extinct fossil animals.
7. What use are fossils to the geologist? Discuss this statement using examples of the fossil groups with which you are familiar.
8. The bodies of bivalve molluscs and brachiopods are enclosed in two shells. Compare and contrast the morphology and mode of life of each.