

Ollscoil na hÉireann, Gaillimh  
NATIONAL UNIVERSITY OF IRELAND, GALWAY  
Summer Examination, 2002  
B.Sc. (Anatomy), AN402  
*Cardiovascular Science and Tissue Engineering*

Paper II – Time allowed: **Two** hours.

Dr S. McDonald

Mr A. Black

Dr M. Salgaonkar

Dr B. Wilkins

Please use separate answer books for each section.

**Section A.** Cardiovascular Science

Answer **Question 1** and **ONE** other.

1. Write an essay on the cardiac conduction system.
2. Outline the key events in the development of the heart.
3. Describe the pathological processes involved in the development of atheroma.

**Section B.** Tissue engineering

Answer **Question 1** and **ONE** other.

1. Write an essay on tissue engineered skin substitutes. Describe the potential sources of cells for these products and any biocompatibility issues associated with the production of skin substitutes.
2. Outline the general considerations involved in making a tissue engineered construct. Cite at least one tissue (excluding skin) as an example.
3. Describe at least one synthetic and at least one natural matrix used in tissue engineering. Include notes on their specific advantages and disadvantages.