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National University of Ireland, Galway
Ollscoil na hÉireann, Gaillimh

WINTER EXAMINATIONS 2001

Third Year Medicine (3MB 242)

BIOCHEMISTRY (BI 410)

Time Allowed:

Three hours

Write on any five (5) of the following:-

1. Discuss immunoglobulin structure in relation to function.
2. Write an essay on retroviruses, with particular reference to HIV.
3. List **five** risk factors for atherosclerosis. Explain the mechanisms by which **three** of these factors contribute to the development of atherosclerotic plaques.
4. Outline the nutrients implicated in the development of cancer. What are the dietary recommendations of the World Cancer Research fund for the prevention of cancer?
5. Write an essay on glutamate as a neurotransmitter with emphasis on its role in long term potentiation.

or

Give a full account of the role of acetylcholine as a neurotransmitter.

6. Describe the role of oncogenes in cancer.
7. Discuss the role of apoptosis in human disease, giving a detailed example to support your answer.
8. Outline the metabolism of the isoprenoids, with particular emphasis on the synthesis of steroid hormones.