

**UNIVERSITY COLLEGE LONDON**

University of London

**EXAMINATION FOR INTERNAL STUDENTS**

For The Following Qualifications:-

*B.Sc. B.Sc. (Intercal)*

**Virology C308: Molecular Virology**

**COURSE CODE : VIRLC308**

**UNIT VALUE : 0.50**

**DATE : 11-MAY-06**

**TIME : 10.00**

**TIME ALLOWED : 3 Hours**

**VIRL3001 MOLECULAR VIROLOGY**

**Candidates must answer Sections A and B.**

**Each question must be answered in a separate book.**

**All questions carry equal weighting.**

**Section A: 135/180 (essay, 3 from 6)**

**Section B: 45/180 (short answers, 1 from 2)**

**TURN OVER**

# VIRL3001 MOLECULAR VIROLOGY

## SECTION A

### Answer THREE questions

1. Describe, with examples, how new and emerging virus infections are identified and how Koch's postulates can be modified to prove disease causation for new pathogens.
2. Compare and contrast the properties and most appropriate clinical applications of adenovirus and lentivirus vectors.
3. Compare and contrast the ways of inhibiting retrovirus, herpesvirus and influenza virus replication with antiviral drugs.
4. Focusing on protein translation discuss the intracellular response that limits viral replication and how viruses circumvent these responses.
5. Describe the steps of the incoming retrovirus life cycle leading to the establishment of a provirus. Also describe how cellular antiviral proteins can inhibit infectivity and protect the host.
6. Describe the functions of virus specific T-cells and how these are affected in chronic viral infection.

## SECTION B

### Answer ONE of the following two questions

1. Discuss the ways retroviruses can cause cancer.
2. Describe the Baltimore classification scheme with examples of virus genome types and replication strategies.

END OF PAPER