

THAPAR UNIVERSITY, PATIALA
(Department of Biotechnology & Environmental Sciences)
End Semester Examination (M.Sc. I Year) May 2007
BH009: Immunology and Virology

Time: 3 hours

Max.Marks:36

Answer any six questions

1. a) Define hypersensitivity. What are the different types of hypersensitive reactions? Give two examples for each type. 3.0
b) Explain briefly the sequence of events in type –I hypersensitivity reaction 3.0
2. a) Explain briefly the mechanisms responsible for inducing autoimmunity. 4.0
b) Briefly explain about delayed type hypersensitivity. 2.0
3. Explain the structure of HIV-1 virion. How does the HIV genome get integrated with host cell DNA? 6.0
4. a) What is LTR and how many of its kinds are found in HIV genome. 3.0
b) Name the major genes in the HIV genome encoding structural, enzyme, and regulatory proteins. 3.0
5. a) Describe the principal events of attachment, penetration, uncoating, biosynthesis, maturation and release of an enveloped DNA containing virus. 3.0
b) How do double-stranded DNA viruses replicate their genome? 3.0
6. a) What characteristics differentiate plant viruses? Write briefly about TMV virus 3.0
b) Write briefly about Prions and Virioids 3.0
7. a) Write briefly about the different isotypes of antibodies. 3.0
b) Explain briefly about the Radio Immuno Assay 3.0
8. Write short notes of the following:
 - a) Central T-cell tolerance 2.0
 - b) Oncoproteins 2.0
 - c) T-cell receptor complex 2.0