

MAY 2011

[KY 025]

Sub. Code: 9125

M.Sc MOLECULAR VIROLOGY EXAMINATION

FIRST YEAR

(for Candidates admitted from 2009-2010 onwards)

PAPER I – BASIC MICROBIOLOGY, VIROLOGY AND IMMUNOLOGY

Q.P. Code : 289125

Time : Three hours

Maximum :100marks

Answer All questions.

I. Elaborate on :

(2 x 20 = 40)

1. Enumerate the different methods of Sterilization. Write in detail about autoclave.
2. Explain in detail various levels of Biosafety in a microbiological laboratory.
Add a note on BSL 3.

II. Write notes on :

(10 x 6 = 60)

1. Guinea Pig.
2. Neutralization test.
3. Fluorescent Microscopy.
4. Decontamination.
5. Chromatography.
6. PCR.
7. Structure / Morphology of Viruses.
8. Hot air oven.
9. Continuous Cell lines.
10. Complement.

[KZ 1011]

Sub. Code: 9125

**M.Sc MOLECULAR VIROLOGY DEGREE EXAMINATION
FIRST YEAR**

(for Candidates admitted from 2009-2010 onwards)

PAPER I – BASIC MICROBIOLOGY, VIROLOGY AND IMMUNOLOGY

Q.P. Code : 289125

**Time : 3 hours
(180 Min)**

Maximum : 100 marks

Answer ALL questions in the same order.

I. Elaborate on :

**Pages Time Marks
(Max.) (Max.) (Max.)**

- | | | | |
|---|----|----|----|
| 1. How will you cultivate and purify virus both in-vivo and in-vitro. | 17 | 40 | 20 |
| 2. Describe in detail the various pathways of complement system activation. | 17 | 40 | 20 |

II. Write notes on :

- | | | | |
|--|---|----|---|
| 1. Containment facilities in a virology laboratory. | 4 | 10 | 6 |
| 2. Ultracentrifugation purification of viruses. | 4 | 10 | 6 |
| 3. Flowcytometry. | 4 | 10 | 6 |
| 4. Confocal microscope principle and application. | 4 | 10 | 6 |
| 5. Chromatography. | 4 | 10 | 6 |
| 6. Signal transduction pathways. | 4 | 10 | 6 |
| 7. Cell line maintenance media. | 4 | 10 | 6 |
| 8. Stem cells. | 4 | 10 | 6 |
| 9. Antibody structure and different immunoglobulin claims. | 4 | 10 | 6 |
| 10. Positive and Negative selection. | 4 | 10 | 6 |

[LA 0412]

Sub. Code: 9125

**M.Sc MOLECULAR VIROLOGY DEGREE EXAMINATION
FIRST YEAR**

(for Candidates admitted from 2009-2010 onwards)

PAPER I – BASIC MICROBIOLOGY, VIROLOGY AND IMMUNOLOGY

Q.P. Code : 289125

Time : Three hours

Maximum :100 marks

Answer All questions.

I. Elaborate on :

**Pages Time Marks
(Max.) (Max.) (Max.)**

- | | | | |
|---|----|----|----|
| 1. Classify Hypersensitivity. Discuss in detail the mechanisms of Type I Hypersensitivity with examples | 17 | 40 | 20 |
| 2. Define virus. Enumerate Baltimore Classification. Describe viral replication mechanisms with examples. | 17 | 40 | 20 |

II. Write notes on :

- | | | | |
|---|---|----|---|
| 1. Polymerase chain reaction and its applications | 4 | 10 | 6 |
| 2. Differences between T and B cells | 4 | 10 | 6 |
| 3. Monoclonal antibodies and its uses | 4 | 10 | 6 |
| 4. Systemic lupus erythematosus | 4 | 10 | 6 |
| 5. Principle of dark ground microscopy | 4 | 10 | 6 |
| 6. Primary lymphoid organs | 4 | 10 | 6 |
| 7. Type IV Hypersensitivity | 4 | 10 | 6 |
| 8. Detection of viral growth in tissue culture | 4 | 10 | 6 |
| 9. Mechanisms of action of Disinfectants | 4 | 10 | 6 |
| 10. Immunoelectrophoresis and its applications | 4 | 10 | 6 |

[LD 1013]

OCTOBER 2013

Sub. Code: 9125

M.Sc MOLECULAR VIROLOGY EXAMINATION

FIRST YEAR

(for Candidates admitted from 2009-2010 onwards)

PAPER I – BASIC MICROBIOLOGY VIROLOGY AND IMMUNOLOGY

Q.P. Code : 289125

Time : 3 hours

Maximum : 100 marks

Answer ALL questions

I. Elaborate on :

(2X20=40)

1. Discuss in detail the various methods of disinfection.
2. Enumerate on Tissue culture methodologies.

II. Writes notes on:

(10X6=60)

1. Gaseous Sterilization
2. Dark field Microscopy
3. Bio-safety Level – 3
4. Antibody structure
5. Interferons
6. Graft Versus Host reaction
7. Handling and maintenance of laboratory animals
8. Ultracentrifugation
9. Karyotyping
10. Gel Electrophoresis.
