

M.Sc. MOLECULAR VIROLOGY DEGREE EXAMINATION**SECOND YEAR****(For candidates admitted from 2009-2010 onwards)****PAPER I – DIAGNOSTIC VIROLOGY****Q.P. Code: 289128****Time : Three Hours****Maximum : 100 marks****Answer ALL questions in the same order.****I. Elaborate on:****Pages Time Marks
(Max.) (Max.) (Max.)**

- | | | | |
|--|----|---------|----|
| 1. Classify the Hepatitis viruses. Discuss in detail the Lab diagnosis of Acute viral hepatitis. | 17 | 40 min. | 20 |
| 2. Discuss briefly on aetiology, pathogenesis and Lab diagnosis of Viral Gastroenteritis. | 17 | 40 min. | 20 |

II. Write notes on :

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|---|---|---------|---|
| 1. Cancers in AIDS. | 4 | 10 min. | 6 |
| 2. Antigenic variations in Influenza A. | 4 | 10 min. | 6 |
| 3. Tick born viral encephalitis. | 4 | 10 min. | 6 |
| 4. Congenital Rubella syndrome. | 4 | 10 min. | 6 |
| 5. Lab diagnosis of Chickenpox. | 4 | 10 min. | 6 |
| 6. Ebola virus. | 4 | 10 min. | 6 |
| 7. Rota virus diversity. | 4 | 10 min. | 6 |
| 8 Epstein Barr virus. | 4 | 10 min. | 6 |
| 9. Lab diagnosis of Chickungunya. | 4 | 10 min. | 6 |
| 10. HIV and molecular biology. | 4 | 10 min. | 6 |

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(Max.) (Max.) (Max.)**

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|--|----|---------|----|
| 1. Discuss briefly on pathogenesis and laboratory diagnosis of Dengue Haemorrhagic Fever. | 17 | 40 min. | 20 |
| 2. Discuss the lab diagnosis of chronic viral hepatitis with special reference to molecular biology. | 17 | 40 min. | 20 |

II. Write notes on :

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|---|---|---------|---|
| 1. Hepatitis E virus. | 4 | 10 min. | 6 |
| 2. Subacute sclerosing panencephalitis. | 4 | 10 min. | 6 |
| 3. Lab diagnosis of Mumps. | 4 | 10 min. | 6 |
| 4. Viral Gastroenteritis. | 4 | 10 min. | 6 |
| 5. Proviral DNA PCR. | 4 | 10 min. | 6 |
| 6. Live viral vaccines. | 4 | 10 min. | 6 |
| 7. Epidemiology of HIV in India. | 4 | 10 min. | 6 |
| 8. West Nile virus. | 4 | 10 min. | 6 |
| 9. Multiplicity reactivation. | 4 | 10 min. | 6 |
| 10. Herpes progenitalis. | 4 | 10 min. | 6 |

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(Max.) (Max.) (Max.)**

- | | | | |
|---|----|---------|----|
| 1. Classify Hepatitis viruses. Describe the morphology, pathogenesis and lab diagnosis of Hepatitis B virus. | 17 | 40 min. | 20 |
| 2. Enumerate the oncogenic viruses. Write about the human oncogenic viruses and mechanism of viral oncogenesis. | 17 | 40 min. | 20 |

II. Write Notes on:

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|---|---|---------|---|
| 1. Prions. | 4 | 10 min. | 6 |
| 2. Viral vaccines. | 4 | 10 min. | 6 |
| 3. Difference between HSV-1 and HSV-2. | 4 | 10 min. | 6 |
| 4. Laboratory diagnosis of HIV infection. | 4 | 10 min. | 6 |
| 5. Viruses causing Diarrhoea. | 4 | 10 min. | 6 |
| 6. Negri bodies. | 4 | 10 min. | 6 |
| 7. Viral tissue culture. | 4 | 10 min. | 6 |
| 8. Interferons. | 4 | 10 min. | 6 |
| 9. Hanta virus. | 4 | 10 min. | 6 |
| 10. Swine flu. | 4 | 10 min. | 6 |

[LF 1014]

OCTOBER 2014

Sub. Code: 9128

M.Sc. MOLECULAR VIROLOGY DEGREE EXAMINATION

SECOND YEAR

(For candidates admitted from 2009-2010 onwards)

PAPER I – DIAGNOSTIC VIROLOGY

Q.P. Code: 289128

Time : Three Hours

Maximum : 100 marks

Answer ALL questions

I. Elaborate on:

(2 x 20 = 40)

1. Enumerate the etiological agents, clinical course, risk factors, epidemiology, prevention and treatment of viral diarrheal diseases.
2. Discuss in detail the viral encephalitic agents, their clinical symptoms, transmission, laboratory diagnosis and their treatment modalities.

II. Write notes on:

(10 x 6 = 60)

1. Vaccines for different viral respiratory diseases.
2. Parvovirus B19.
3. Opportunistic infections in HIV infected individuals.
4. Classify herpes viruses. Laboratory diagnosis of Herpes Simplex infection.
5. Post infectious encephalitis.
6. Polio eradication programme.
7. Hepatitis A virus.
8. Yellow fever vaccine.
9. Pathogenesis and complications of measles.
10. Human papilloma virus.

[LH 0415]

OCTOBER 2015

Sub. Code: 9128

M.Sc., MOLECULAR VIROLOGY
(for Candidates admitted from 2009-2010 Batch onwards)
SECOND YEAR
PAPER I – DIAGNOSTIC VIROLOGY

Q.P. Code : 289128

Time : Three hours

Maximum : 100 marks

I. Elaborate on :

(2 x 20 = 40)

1. Enumerate Viral replication strategy, pathogenesis, clinical features, laboratory diagnosis and prevention of Dengue virus.
2. Discuss in detail the viral encephalitic agents, their clinical symptoms, transmission, laboratory diagnosis and their treatment modalities.

II. Write notes on:

(10 x 6 = 60)

1. Corona virus.
2. Viral Hemorrhagic fever.
3. Viral hepatitis vaccine.
4. Laboratory diagnosis of HIV infection.
5. Pathogenesis and complication of Measles.
6. Kyasanur forest disease.
7. Hepatitis C virus.
8. Polio eradication programme.
9. Mumps virus.
10. Etiological agents, prevention and treatment of viral diarrheal diseases.

[LJ 1016]

OCTOBER 2016

Sub. Code: 9128

**M.Sc. MOLECULAR VIROLOGY EXAMS
SECOND YEAR
PAPER I – DIAGNOSTIC VIROLOGY**

Q.P. Code : 289128

Time : Three hours

Maximum : 100 Marks

I. Elaborate on:

(2 x 20 = 40)

1. Explain in detail the infection of cells, replication, pathogenesis, prevention and treatment of dengue viral infection.
2. Enumerate the role of oncogenic viruses in the pathogenesis of cancer, diagnosis and prevention.

II. Write notes on:

(10 x 6 = 60)

1. Diversity of Rota virus.
2. Vaccines against Influenza viral infections.
3. Para specific immunity of pox vaccination.
4. Epidemiology of HIV.
5. Morbidity of HIV against other sexually transmitted diseases.
6. Diagnosis of Rabies.
7. Types of hepatitis vaccines.
8. Differential diagnosis of various respiratory viral diseases.
9. Treatment of viral encephalitis.
10. Risk factors for Measles, Rubella and Mumps.

[LL 1017]

OCTOBER 2017

Sub. Code: 9128

**M.Sc. MOLECULAR VIROLOGY EXAMS
SECOND YEAR
PAPER I – DIAGNOSTIC VIROLOGY**

Q.P. Code : 289128

Time : Three hours

Maximum : 100 Marks

I. Elaborate on: **(2 x 20 = 40)**

1. Enumerate the encephalitis group of ARBO viruses. Write in detail about the replication cycle, pathogenesis, epidemiology, clinical features, and lab diagnosis of Japanese B encephalitis (JE). Add a note on immuno-propylaxis of JE.
2. List the hepatotropic viruses. Describe the pathogenesis, clinical diseases and epidemiology of Hepatitis B virus. Explain how various viral markers of HBV are detected and their clinical significance in various stages of the disease.

II. Write notes on: **(10 x 6 = 60)**

1. Coxsackie viruses.
2. Polio vaccine switch strategy in India.
3. Laboratory diagnosis of Swine flu.
4. Write on the pathogenicity and laboratory diagnosis of measles.
5. Slow virus diseases.
6. Methods of cultivation of viruses.
7. Respiratory syncytial virus.
8. Virus vectors in vaccinology.
9. Applications of PCR in diagnosis and treatment of HIV/AIDS.
10. Diagnosis of congenital Rubella syndrome.

[LN 1018]

OCTOBER 2018

Sub. Code: 9128

**M.Sc. MOLECULAR VIROLOGY EXAMS
SECOND YEAR
PAPER I – DIAGNOSTIC VIROLOGY**

Q.P. Code : 289128

Time : Three hours

Maximum : 100 Marks

I. Elaborate on: **(2 x 20 = 40)**

1. Enumerate the role of non human hosts in Japanese encephalitis and Chandipura encephalitis infections. Describe in detail the burden, clinical features, lab diagnosis and immunoprophylaxis of Japanese encephalitis. .
2. Elaborate the role, mechanism and pathogenesis exhibited by various viruses in causing cancer. Write in detail on diagnosis and prevention of viral cancers.

II. Write notes on: **(10 x 6 = 60)**

1. Prevention of rota virus infection.
2. Challenges of vaccines against respiratory viral infections.
3. Emergence of drug resistance in influenza viruses.
4. Hepatitis vaccines.
5. Clinical aspects of Parvovirus B-19.
6. Viral hemorrhagic manifestations and their differential diagnosis.
7. Vaccine against Kyasanur Forest Disease.
8. Morbidity of measles and SSPE.
9. Diagnosis of Rabies and therapy.
10. Factors affecting the neurovirulence of viruses.

[LP 1019]

OCTOBER 2019

Sub. Code: 9128

**M.Sc. MOLECULAR VIROLOGY EXAMS
SECOND YEAR
PAPER I – DIAGNOSTIC VIROLOGY**

Q.P. Code : 289128

Time : Three hours

Maximum : 100 Marks

I. Elaborate on: **(2 x 20 = 40)**

1. Immuno pathogenesis of respiratory viruses and discuss the efficiency of vaccines against different viral respiratory diseases.
2. Enumerate the viruses causing Hemorrhagic fevers with their Geographic distribution. Discuss the clinical features, diagnosis and prevention.

II. Write notes on: **(10 x 6 = 60)**

1. Oncogenic viruses and diseases associated with them.
2. Emerging and Re-emerging viral diseases.
3. Laboratory diagnostic methods of SARS.
4. Epidemiology of Influenza.
5. Paraspecific immunity in pox vaccinations.
6. Pathogenesis of parvovirus B-9 infection.
7. Role of immunity in Dengue hemorrhagic fever.
8. Opportunistic infections in AIDS.
9. Structure of Rota virus.
10. Pathogenesis of Measles Encephalitis.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[AHS 0321]

MARCH 2021

Sub. Code: 9128

(OCTOBER 2020 EXAM SESSION)

M.Sc. MOLECULAR VIROLOGY

SECOND YEAR (From 2009-2010 onwards)

PAPER I – DIAGNOSTIC VIROLOGY

Q.P. Code : 289128

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate notes on:

(2 x 20 = 40)

1. Enumerate the viruses causing SARS. Describe in detail the structure, pathogenesis & laboratory diagnosis of SARS – CoV – 2 infection in humans. Add a note on the vaccines for the same under trial.
2. Name the viruses causing Hepatitis in humans. Write in detail the structure, pathogenesis, laboratory diagnosis & prevention of Hepatitis B viral infection.

II. Write Short Notes on:

(10x6 = 60)

1. Laboratory Diagnosis of cytomegalovirus infection
2. Antibody dependent immune enhancement in Dengue.
3. Influenza vaccine.
4. Strategies adopted for polio eradication.
5. Fifth generation ELISA in HIV infection.
6. Laboratory diagnosis of Rabies in dogs & humans.
7. NIPAH virus.
8. Suckling mice .
9. Loop-mediated isothermal amplification Assay.
10. Phases of vaccine trials.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[AHS 0122]

**JANUARY 2022
(OCTOBER 2021 EXAM SESSION)**

Sub. Code: 9128

**M.Sc. MOLECULAR VIROLOGY
SECOND YEAR (From 2009-2010 onwards)
PAPER I – DIAGNOSTIC VIROLOGY
*Q.P. Code : 289128***

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate notes on:

(2 x 20 = 40)

1. Enumerate the viruses transmitted through blood. Discuss in detail the structure, pathogenesis, laboratory diagnosis and prevention of Hepatitis C virus.
2. Discuss the epidemiology of SARS-CoV-2. Discuss in detail the structure, pathogenetic mechanisms, laboratory diagnosis and vaccine trials of SARS-CoV-2 infection.

II. Write Short Notes on:

(10x6 = 60)

1. Inclusion bodies and their diagnostic significance.
2. NACO strategies for HIV diagnosis.
3. Ebola virus.
4. Laboratory Diagnosis of Dengue infection.
5. Viral growth inhibitors in serum.
6. Use of mice in diagnostic virology.
7. Subunit vaccine.
8. Respiratory syncytial virus infection.
9. Rubella prophylaxis.
10. Haemagglutinating viruses.

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[AHS 1022]

OCTOBER 2022

Sub. Code: 9128

**M.Sc. MOLECULAR VIROLOGY
SECOND YEAR (From 2009-2010 & 2020-2021 onwards)
PAPER I – DIAGNOSTIC VIROLOGY**

Q.P. Code : 289128

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate notes on:

(2 x 20 = 40)

1. Discuss in detail the spread of SARS – CoV - 2 pandemic. Write in detail the structure, pathogenesis and laboratory diagnosis of the same with a note on vaccine trials.
2. Enumerate the neurotropic viruses. Discuss in detail the structure of Rabies virus along with the pathogenesis and laboratory diagnosis of Rabies infection in humans. Add a note on prophylaxis.

II. Write Short Notes on:

(10x6 = 60)

1. Zika Virus.
2. Types of cell culture and their maintenance.
3. Arthropod borne viral infections.
4. Haemagglutination inhibition tests.
5. Measles vaccine.
6. Pathogenesis of cancers caused by viruses.
7. Laboratory diagnosis of Hepatitis E infection.
8. Recombination in influenza.
9. Laboratory diagnosis of primary and secondary dengue infection.
10. Pathogenesis of EBV infection.
