

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

[DM 0124]

JANUARY 2024

Sub. Code :1502

D.M. – VIROLOGY

**PAPER – II – SYSTEMIC VIROLOGY & DIAGNOSTIC METHODS, VIRAL
IMMUNOLOGY & ENTOMOLOGY**

Q.P. Code: 161502

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. List all the viruses that can be transmitted through the Parenteral route. Give the pathogenesis, laboratory diagnosis, prevention and treatment of any one of them.
2. Which are arthropod-borne viruses seen in India? Give the clinical features, pathogenesis, laboratory diagnosis, vector(s) and prevention of any one of them.

II. Write notes on:

(10 x 7 = 70)

1. Virus neutralization.
2. IgM detection assays.
3. Quality indices in Virology.
4. Innate immune responses to viral infections.
5. Virus inactivation methods.
6. Tickborne haemorrhagic fevers.
7. Virus oncogenesis.
8. Persistent viral infections.
9. Virus propagation methods.
10. Virus co-receptors.

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

[DM 0225]

FEBRUARY 2025

Sub. Code :1502

D.M. – VIROLOGY

**PAPER II – SYSTEMIC VIROLOGY & DIAGNOSTIC METHODS, VIRAL
IMMUNOLOGY & ENTOMOLOGY**

Q.P. Code: 161502

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. What are universal influenza vaccines? Discuss the various approaches to generate broad reactivity to influenza viruses. List the newer correlates of protection to assess the efficacy of these vaccines.
2. Discuss in detail the stages of cervical cancer and the role of Human papillomavirus (HPV) viral oncogenes in progression. Discuss the laboratory methods that can be used for grading, staging and prognostication of these cancers.

II. Write notes on:

(10 x 7 = 70)

1. High-throughput antibody detection.
2. Single-cell sequencing in Virology.
3. Droplet digital PCR.
4. Affinity maturation.
5. Immune senescence.
6. Antibody effector function.
7. Sandflies.
8. Methods for vector control.
9. Nirsevimab.
10. Inclusion bodies.

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

[DM 0126]

JANUARY 2026

Sub. Code :1502

D.M. – VIROLOGY

**PAPER II – SYSTEMIC VIROLOGY & DIAGNOSTIC METHODS,
VIRAL IMMUNOLOGY & ENTOMOLOGY**

Q.P. Code: 161502

Time: Three Hours

Maximum: 100 Marks

I. Elaborate on:

(2 x 15 = 30)

1. Outline the approaches for laboratory diagnosis of viral infections. Discuss in detail the virological diagnosis and monitoring of Hepatitis B virus infection.
2. Describe in detail the mechanisms of antiviral immunity. Write a brief note on immune evasion strategies described for human pathogenic viruses.

II. Write notes on:

(10 x 7 = 70)

1. Immunochromatographic assays.
2. Classification of Family Picornaviridae.
3. Waldeyer's ring.
4. TORCH infections.
5. Impact of climate change on arbovirus transmission.
6. Transmissible Spongiform encephalopathy.
7. Microcephaly.
8. Bat cell lines.
9. Mucosal immunity.
10. Haemaphysalis spinigera.
