

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

[AHS 1022]

OCTOBER 2022

Sub. Code: 9131

**M.Sc. MOLECULAR VIROLOGY
SECOND YEAR (From 2020-2021 onwards)
PAPER II – EPIDEMIOLOGY OF VIRAL INFECTIONS AND APPLIED
ENTOMOLOGY
Q.P. Code : 289131**

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

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

1. What is the purpose and main components of an outbreak investigation?
2. That various vector mosquito control strategies.

II. Write Short Notes on: (10x6 = 60)

1. Mechanism of insecticide resistance.
2. Host preferences of vector mosquitoes.
3. Characteristics of biological and mechanical vectors.
4. Arthropods (Vectors) of public health importance.
5. Molecular approach to taxonomy of vectors.
6. Define: Sporadic, Pandemic, Exotic.
7. What are the types of analytical epidemiology?
8. Infectious Disease Surveillance Methods.
9. Epidemiological determinants of varicella.
10. Relative Risk and Attributable Risk.

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PAPER II – EPIDEMIOLOGY OF VIRAL INFECTIONS AND APPLIED
ENTOMOLOGY**

Q.P. Code: 289131

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate notes on:

(2 x 20 = 40)

1. The various methods for control of vectors.
2. Types and methods of public health and infectious disease surveillance.

II. Write Short Notes on:

(10x6 = 60)

1. How does Wolbachia reduce dengue?
2. Criteria for insecticide selection.
3. Xenodiagnosis.
4. Transgenic mosquitoes.
5. Vector dynamics and transmission of dengue virus.
6. Define epidemics and mention its types.
7. Comparison of cohort and case – control study.
8. Steps in outbreak investigation.
9. Randomized controlled trials.
10. What is the difference between causation and association?

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

[AHS 1024]

OCTOBER 2024

Sub. Code: 9131

**M.Sc. MOLECULAR VIROLOGY
SECOND YEAR (From 2020-2021 onwards)
PAPER II – EPIDEMIOLOGY OF VIRAL INFECTIONS AND APPLIED
ENTOMOLOGY**

Q.P. Code: 289131

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(2x20=40)

1. Elaborate on the necessity of Outbreak investigations. Describe the measures adopted to prevent outbreaks. Brief note on indicators for surveillance.
2. Classify arthropods of medical importance and give a detailed account of role of mosquitoes in transmission of viral pathogens with suitable examples.

II. Write Short Notes on:

(10x6 = 60)

1. Xenodiagnosis with suitable examples.
2. Cohort Studies.
3. Sylvatic cycle.
4. Case Fatality Rate.
5. Seroprevalence studies.
6. Odds Ratio.
7. Sensitivity and Specificity.
8. Herd Immunity.
9. Breteau Index.
10. Transgenic Vectors.

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

[AHS 1025]

OCTOBER 2025

Sub. Code: 9131

**M.Sc. MOLECULAR VIROLOGY
SECOND YEAR (From 2020-2021 onwards)
PAPER II – EPIDEMIOLOGY OF VIRAL INFECTIONS AND APPLIED
ENTOMOLOGY**

Q.P. Code: 289131

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

I. Elaborate on:

(2 x 20 = 40)

1. Explain in detail the design of surveillance study for viral infections having varied transmission modes and routes.
2. Briefly discuss about the Arboviral diseases transmission and control strategy.

II. Write Short Notes on:

(10x6 = 60)

1. Molecular approach to taxonomy of mosquitoes.
2. Transtadial and transovarian transmission.
3. Epidemiology of chikungunya virus.
4. Insecticidal resistance.
5. Ecological impact in vector borne diseases.
6. Competence in virus-vector relationship.
7. Epidemiology of Nipah virus.
8. Case fatality rate.
9. Virus dissemination & mechanism of virus transmission in vectors.
10. Vector control measures in urban setting.
