[KZ 1011]   **Sub. Code: 9129**

M.Sc MOLECULAR VIROLOGY EXAMINATION

SECOND YEAR

(for Candidates admitted from 2009-2010 onwards)

PAPER II – APPLIED EPIDEMIOLOGY AND APPLIED ENTOMOLOGY

Q.P. Code : 289129

Time : 3 hours   **Maximum : 100 marks**
     (180 Min)
                Answer ALL questions in the same order.

I. Elaborate on :	Pages (Max.)	Time (Max.)	Marks (Max.)
1. Describe the steps in conducting a case-control study.	17	40	20
2. Explain the steps in investigation of an epidemic.	17	40	20

II. Write notes on :

1. Types of infectious disease surveillance	4	10	6
2. Establishing surveillance system for infectious diseases	4	10	6
3. Xenodiagnosis	4	10	6
4. Mechanism of virus transmission in vectors	4	10	6
5. Geographical Information System in vector borne viral diseases	4	10	6
6. Insecticide resistance in vectors	4	10	6
7. Transgenic vectors	4	10	6
8. Molecular approach to taxonomy of vectors	4	10	6
9. Environmental management in mosquito control	4	10	6
10. Personal protection against vectors	4	10	6

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M.Sc MOLECULAR VIROLOGY EXAMINATION-April 2012

SECOND YEAR

(for Candidates admitted from 2009-2010 onwards)

PAPER II – APPLIED EPIDEMIOLOGY AND APPLIED ENTOMOLOGY

Q.P. Code : 289129

Time : Three hours   **Maximum :100marks**

Answer All questions.

I. Elaborate on :	Pages (Max.)	Time (Max.)	Marks (Max.)
1. Explain the steps in investigation of an epidemic.	17	40	20
2. Explain the various methods of control of vectors.	17	40	20

II. Write notes on :

	Pages	Time	Marks
1. Types of infectious disease surveillance	4	10	6
2. Establishing surveillance system for infectious diseases	4	10	6
3. Differences between case control and cohort study	4	10	6
4. Relative Risk and Attributable Risk	4	10	6
5. Bias in case control study	4	10	6
6. Xenodiagnosis	4	10	6
7. Mechanism of virus transmission in vectors	4	10	6
8. Geographical Information System in vector borne viral diseases	4	10	6
9. Insecticide resistance in vectors	4	10	6
10. Transgenic vectors	4	10	6

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SECOND YEAR
(for Candidates admitted from 2009-2010 onwards)
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Q.P. Code : 289129

Time : 3 hours   **Maximum : 100 marks**
         (180 Min)

Answer ALL questions in the same order.

I. Elaborate on :	Pages (Max.)	Time (Max.)	Marks (Max.)
1. Explain in detail the application and importance of Geographical Information System in surveillance, outbreak investigation and management of vector borne diseases.	17	40	20
2. Explain in detail the vector control strategies. Discuss the merits and demerits of vector control strategies.	17	40	20
II. Writes notes on:			
1. Probability and non-probability sampling methods.	4	10	6
2. Steps in outbreak investigation.	4	10	6
3. Merits and demerits of Cohort studies.	4	10	6
4. Relative Risk and Attributable Risk.	4	10	6
5. Design of surveillance study for air borne viral infections.	4	10	6
6. Mechanism of insecticide resistance.	4	10	6
7. Xenodiagnosis.	4	10	6
8. Characteristics of biological and mechanical vectors.	4	10	6
9. Public health importance of vector mosquitoes.	4	10	6
10. Molecular mechanism of pathogenesis of chikungunya and dengue viruses.	4	10	6

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Time : 3 hours   **Maximum : 100 marks**
     (180 Min)

I. Elaborate on: **(2x20=40)**

1. Explain in detail the steps involved in an outbreak investigation.

2. Define xenodiagnosis. Explain the methods and applications of xenodiagnosis.

II. Write notes on :   **(10X6=60)**

1. Sample size determination.

2. Merits and demerits of case control study.

3. Establishing surveillance system for viral diseases.

4. Active and passive surveillance systems.

5. Vector control in urban setting.

6. Life cycle of Plasmodium.

7. Differences in the features of Aedes, Anopheles and Culex mosquitoes.

8. Transgenic vectors.

9. Importance of Geographical Information System in the epidemiology of vector borne diseases.

10. Criteria for selection of an effective insecticide.

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