

**STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI –600 086**  
(For candidates admitted during the academic year 2023 – 2024 & thereafter)

**M. Sc. DEGREE EXAMINATION, APRIL 2026**  
**BIOTECHNOLOGY**  
**SECOND SEMESTER**

**COURSE : ELECTIVE**  
**PAPER : VIROLOGY**  
**SUBJECT CODE : 23BY/PE/VR15**  
**TIME : 3 HOURS**

**MAX. MARKS: 100**

Q. No.	SECTION A Answer ALL Questions (10 x 1 = 10 marks)	CO	KL
1	Define viral taxonomy.	1	1
2	Name the host cell structure involved in viral attachment.	1	1
3	Define latent infection.	1	1
4	Name one tumor virus infecting humans.	1	1
5	Name the enzyme used in PCR.	1	1
6	Expand ELISA.	1	1
7	Which enzyme is required for RNA virus replication?	1	1
8	What is meant by “switch on” of viral genes?	1	1
9	What are Creutzfeldt–Jakob Disease?	1	1
10	Name one live attenuated viral vaccine.	1	1
Q. No.	SECTION B Answer ALL Questions (5 x 2 = 10 marks)	CO	KL
11	Why is a capsid essential for viral survival?	1	2
12	Relate why the Baltimore classification is considered a functional system	1	2
13	Differentiate between null infection and abortive infection	1	2
14	Explain how rotavirus infection causes dehydration in children.	1	2
15	Name the virus preferred for allantoic cavity inoculation.	1	2
Q. No.	SECTION C Answer ALL Questions (4 x 10 = 40 marks)	CO	KL
16	Demonstrate the application of immunological and molecular methods in early diagnosis of viral infections. (OR) Illustrate the stages of viral replication in host cells with a neat, labeled diagram?	2	3
17	Apply the concept of host–virus interaction to explain the spread of viruses through horizontal and vertical transmission. (OR) Show how symptom progression helps in identifying chronic sexually transmitted viral infections.	2	3
18	Analyze the different types, transmission and pathogenesis of Human Papilloma Virus (OR) Examine the morphology, laboratory diagnosis, and treatment of Hepatitis B virus.	3	4
19	List the types of tissue cultures and examine their advantages and limitations in viral cultivation (OR) Examine the major steps involved in the production of viral vaccines.	3	4

Q. No.	<b>SECTION – D</b> <b>Answer ALL Questions</b> (2 x 20 = 40 marks)	CO	KL
20	Evaluate the common signs and symptoms of major gastrointestinal viral infections <b>(OR)</b> Assess the pathogenesis, Clinical features and Laboratory diagnosis of herpes virus infection	4	5
21	Elaborate the general properties and importance of viruses <b>(OR)</b> Design a comprehensive framework explaining the spectrum, etiology, and pathogenesis of prion diseases?	5	6

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