

PARUL UNIVERSITY
PARUL INSTITUTE OF APPLIED SCIENCES
MID SEMESTER INTERNAL EXAMINATION, APRIL 2017
M. Sc. Semester II

Subject: Microbiology/Biotechnology

Paper Code: 11201151

Title of the paper: Molecular Virology

Date: 13 /04/2017

Time: 12.30 p.m. to 02.00 p.m.

Maximum Marks: 40

Instructions:

- 1. All questions are compulsory and options are given in first and second question only.**
 - 2. Numbers to the right of question indicate the marks of respective question.**
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- Q. 1** Attempt any one question of the following. **(08)**
(i) Write down the detail structure of TMV
(ii) Write the detail methods of cultivation of virus (any two).
- Q. 2** Attempt any three questions of the following. **(12)**
(i) Short note on Viral classification system
(ii) Short note on Structure of CaMV.
(iii) What are the structural difference between T2 and T7?
(iv) Write a short note on the replication mechanism of M13 phage
(v) Write a short note on structure of bacteriophage
- Q. 3** Do as directed. Attempt all five questions. **(05)**
(i) Name any two plant virus with their host.
(ii) Name two methods of preservation of virus.
(iii) What are satellites?
(iv) How many coat proteins does ϕ X174 contain?
(v) Name two cell cultures used to cultivate viruses.
- Q. 4** Write correct option in your answer sheet for following 15 multiple choice questions. **(15)**

- MCQ 1 -----is the sub viral agent
(A) Virioids (B) Prions
(C) Satellites (D) All of above
- MCQ 2 The protective coat of viral genome is called
(A) Capsomere (B) Capsule
(C) Capsid (D) Spore
- MCQ 3 How many classification system exists for Viruses?
(A) 3 (B) 4
(C) 5 (D) 2
- MCQ 4 Infectious Viral unit is called
(A) Virion (B) Viriod
(C) Viromere (D) Prions
- MCQ 5 Overlapping genes can be found in
(A) ϕ X174 (B) Lamda
(C) Both of them (D) None
- MCQ 6 The genome of ϕ X174 is

- (A) ds DNA (B) ds RNA
(C) ss DNA (D) ssRNA
- MCQ 7 Viroids can found in
(A) Plant (B) Fungus
(C) Animal (D) Bacteria
- MCQ 8 Which protein is called antiterminator in lamda phage?
(A) CIII (B) CII
(C) CI (D) N
- MCQ 9 The viral quantification technique is
(A) ELISA (B) HPLC
(C) Plaque Assay (D) None
- MCQ 10 The genome of T7 is
(A) ssRNA (B) dsRNA
(C) dsDNA (D) ssDNA
- MCQ 11 Replicase can be found in
(A) TMV (B) CaMV
(C) PMV (D) HIV
- MCQ 12 The host of T2 is
(A) Bacillus sp (B) Algae
(C) Fungus (D) *E. coli*
- MCQ 13 TMV infected
(A) Tobacco leaves (B) Tobacco entire body
(C) Tobacco root (D) Tobacco stem
- MCQ 14 The virus cultivation method is(are)
(A) Cell culture (B) Egg inoculation
(C) Animal inoculation (D) All of above
- MCQ 15 M13 is a
(A) Filamentous phage (B) Non filamentous phage
(C) Scattered phage (D) Singular phage

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