

PARUL UNIVERSITY
FACULTY OF APPLIED SCIENCE
M.Sc./IMSC, Summer 2018-19 Examination

Semester: 2/8

Subject Code: 11201151

Subject Name: Molecular Virology

Date: 05/04/2019

Time: 10:30 am to 01:00 pm

Total Marks: 60

Instructions:

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

- Q.1. A) Essay type/ Brief note (4x2) (Each of 04 marks) (08)**
 (a) Justify whether Virus is alive or not.
 (b) Explain in detail Morphological types of Viruses
- Q.1. B) Answer the following questions (Any two) (04)**
 (a) Short note/ Brief note (2x2)/ Schematically label the figures (2x2) (Each of 02 marks) (04)
 1. How antigenic shift, or reassortment, can result in novel and highly pathogenic strains of human flu?
 2. Describe Reverse Transcribing Viruses.
 (b) Write a note on Nucleic Acid formats of Viruses. (04)
 (c) Describe a Typical Viral Life Cycle. (04)
- Q.2. A) Answer the following questions. (04)**
 (a) Short note/ Brief note (2x2)/ Fill in the blanks. (Each of 02 marks) (04)
 1. Explain Host Range of Viruses.
 2. Define what is ICTV. What is its role?
 (b) What effects do cells indicate after virus infection? (04)
- Q.2. B) Answer the following questions (Any two) (03)**
 (a) Short note/ Multiple choice questions. (Each of 01 marks) (03)
 1. Describe what is Virus Classification?
 2. What is Virus Species as per ICTV?
 3. Mention the contribution of David Baltimore towards Virology.
 (b) Describe Capsid type, Symmetry and Nucleic acid type of Reovirus. (03)
 (c) Which two groups of Baltimore classification classifies reverse transcribing viruses? (03)
- Q.3. A) Essay type/ Brief note (4x2) (Each of 04 marks) (08)**
 (a) Where would you isolate a virus from?
 (b) Describe Nucleic acid based virus detection methods.
- Q.3. B) Answer the following questions (Any two) (04)**
 (a) Short note/ Brief note (2x2)/ Schematically label the figures (2x2) (Each of 02 marks) (04)
 1. Write a brief note on Bacteriophage T7.
 2. Explain the role of BCA in virus detection.
 (b) What are Viral Plaques? (04)
 (c) Can Quantitative PCR be utilized in Virus counting? Explain briefly. (04)
- Q.4. A) Answer the following questions. (04)**
 (a) Short note/ Brief note (2x2)/ Fill in the blanks. (Each of 02 marks) (04)
 1. Explain ELISA briefly.
 2. Explain the terms 'Virus transformation'.
 (b) Describe Enterobacteria phage T2. (04)
- Q.4. B) Answer the following questions (Any two) (03)**
 (a) Short note/ Multiple choice questions. (Each of 01 marks) (03)
 1. How many groups are enlisted in Holmes classification of viruses?
 2. Give the full form of DDBJ
 3. Give the full form of BLAST
 (b) Enlist three virus classification systems. (03)
 (c) Mention any three sub-viral entities. (03)