

B.Sc. Examination - April - 2016

Semester - V

Paper : Mi-501 - Virology & Genetics

Paper Code: 4306

Time: 2:30 Hours

Total Marks: 70

**Instructions:** (a) Figure to the right indicates total marks of respective question.  
(b) Draw neat, clean and labeled diagram wherever necessary.

- 1.(a) Explain: Purification of virus. 10  
1.(b) Write a note on: Criteria used for virus classification. 04

OR

- 1.(a) Discuss: The structure of HIV. 10  
1.(b) Explain: Various inclusion bodies produced by virus in host tissues. 04

- 2.(a) Explain: Experiments proving DNA as a genetic material. 10  
2.(b) Explain: Ames's test. 04

OR

- 2.(a) Explain: Macrolesion mutation. 10  
2.(b) Explain: Types of mutants. (any 4) 04

- 3.(a) Explain: Photoreactivation & excision DNA repair mechanism. 10  
3.(b) Explain: Genetic code is triplet and degenerate. 04

OR

- 3.(a) Explain: Translation. 10  
3.(b) Explain: Messelson & Stahl experiment. 04

- 4.(a) Discuss: Cultivation of virus. 10  
4.(b) Explain: Lysogenic cycle. 04

OR

- 4.(a) Explain: Types of plasmids. 10  
4.(b) Write a short note on: Physical mutagens. 04

- 5.(a) Discuss: Structure of DNA. 10  
5.(b) Explain: Rolling circle model of DNA replication. 04

OR

- 5.(a) Discuss: Plant-plant virus interaction. 10  
5.(b) Define mutagen. Explain base analogue mutagens. 04