

2012

M.Sc.

3rd Semester Examination

BIOCHEMISTRY

PAPER—BIC-304

Full Marks : 40

Time : 2 Hours

The figures in the right-hand margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

Illustrate the answers wherever necessary.

(Molecular Virology)

Answer all questions.

Group—A

1. Answer any *five* questions from the following : 2×5

(a) What are transductants and lysogens?

(b) Is viral pneumonia a specific disease?

(c) What do you know about pfu? write its utility.

(Turn Over)

- (d) What are + strand and - strand viruses ?
- (e) State the structural differences between T1 and T3 phages.
- (f) What are retrotransposons ?
- (g) Mention few important characteristics used in viral classification.
- (h) What is host restriction ? How is it generally determined ?

Group—B

Answer any *two* questions from the following : 5×2

- 2. What is One-step growth experiment? Write its significance. Define viremia. 4+1
- 3. Discuss briefly how does cauliflower virus help in gene transfer. 3+2
- 4. What is cis-trans test ? How gene order can be determined by generalized transduction ? 2+3
- 5. Discuss various mechanisms of phage virion release from host bacteria. Define concatamer. 3+2

Group—C

Answer any *two* questions from the following : 10×2

6. What is HFT and LFT? Describe how does HFT occur by λ phage infection in E.coli. 4+6
7. Discuss the molecular events that lead to formation of AIDS after HIV infection. 10
8. What are meant by recombination frequency and co-transduction? How does recombination help in bacterio λ phage gene mapping? 4+6
9. (a) Give a brief account of viral nucleic acid.
- (b) How λ phage can make a choice between lytic and lysogenic cycle? 4+4
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