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5860

*Your Roll No*

B.Sc. (Hons.)/II

J

MICROBIOLOGY – Paper VI

(Virology)

(NC – Admissions of 2004 and after)

*Time 3 Hours*

*Maximum Marks 60*

*(Write your Roll No on the top immediately  
on receipt of this question paper )*

*Attempt any five questions*

*All questions carry equal marks*

- 1 (a) What do you understand by Satellite Viruses ? (2)
- (b) Comment upon the agents of slow infection (3)
- (c) What is m o i ? Explain its significance (2)
- (d) Describe one step multiplication curve of bacteriophages (4)
- (e) Define syncytia (1)

P T O

2 Give the salient features of following viral genomes (any 4) –

(a) Hepatitis B

(b) TMV

(c) Caulimoviruses

(d) Influenza

(e) Picornaviruses (3×4=12)

3 (a) What are Interferons ? Describe their mode of action (3)

(b) What are diploid cell strains and cell lines ? (3)

(c) Describe any two methods which can be used for final purification of viruses (3)

(d) Discuss the symmetry of viruses (3)

4 Describe the following techniques (any 4) –

(a) Western Blotting

(b) ELISA

(c) Haemagglutination

(d) Immuno diffusion

(e) Phage display (3×4=12)

- 5 (a) How does cell to cell movement of plant viruses occurs ? (3)
- (b) Discuss the lysogeny in phage  $\lambda$  or  $P_1$  (3)
- (c) What are td mutants of RSV ? (2)
- (d) Discuss the significance of viral vectors in gene therapy (3)
- (e) What are viral envelopes composed of ? (1)
- 6 (a) Explain the regulation of transcription in phage  $\lambda$  (3)
- (b) Comment upon the maturation and release of viruses (3)
- (c) What do you understand by immunity to superinfection ? What is its significance ? (2)
- (d) Discuss the following –
- (i) Retrotransposons
- (ii) Proto oncogenes (2×2=4)