

2018

2nd Semester

MICROBIOLOGY

PAPER—C4T

(Honours)

Full Marks : 40

Time : 2 Hours

The figures in the margin indicate full marks.

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

Illustrate the answers wherever necessary.

1. Answer any *five* questions from the following : 5×2
- (a) Define viroid. Name a disease caused by viroid. 1+1
- (b) Name one virus with (+) strand RNA and one with double stranded RNA. 1+1

(Turn Over)

- (c) What are the basic symmetries found in viral particle? 2
- (d) Write down the difference between capsid and capsomere. 2
- (e) What is meant by viral titer? Mention its utility. 1+1
- (f) Describe vertical and horizontal viral transmissions. 1+1
- (g) Write down the difference between antigenic shift and antigenic drift. 1+1
- (h) What is the role of segmented genome in viruses? Give one example. $1\frac{1}{2} + \frac{1}{2}$

2. Answer any *four* questions from the following : 4×5

- (a) (i) Name phage which is neither lytic nor lysogenic in strict sense.
- (ii) Elucidate your answer with appropriate reasons.
- (b) Write a short note on cultivation of viruses. 5

- (c) (i) Briefly describe the alternate splicing mechanism of HIV genome. 4+1
- (ii) What is window period ? 4+1
- (d) (i) Define vaccine. 2+3
- (ii) State general principles of vaccination. 2+3
- (e) What is the significance of partial double stranded genome of Hepatitis B virus ? What is Dane particle ? 3+2
- (f) (i) What are the important members of Picorna viridae ?
- (ii) Give the techniques of replication of this group of viruses in suitable, host. 2+3
3. Answer any *one* question from the following : 1×10
- (a) (i) Mention the importance of HPV (Human Papilloma Virus). 2+5+3
- (ii) How is it involved in cancer development ?
- (iii) Mention any two anti-viral drugs that are used for treatment of HPV. 2+5+3

- (b) (i) Write a note on viral vectors used in cloning of foreign genes.
- (ii) What is a concatemer ?
- (iii) Write down general principle of viral vaccination.

5+2+3
