Total No. of Printed Pages—2

6 SEM TDC ZOO M 3

2015

(May)

ZOOLOGY

(Major)

Course : 603

(Molecular Biology and Immunology)

Full Marks : 48
Pass Marks : 19

Time : 2 hours

The figures in the margin indicate full marks for the questions

Answer Question No. **1** and *any* **two** from the rest

1. *(a)* Fill in the blanks : 1×5=5

(i) In eukaryotic monocistronic gene, the noncoding sequences are called ——.

(ii) Most abundant class of immunoglobulin is ——.

(iii) The enzyme required for initiation of unwinding of DNA is termed as ——.

(iv) —— was awarded Nobel Prize for synthesis of RNA.

(v) The receptor through which HIV infects is ——.

(b) Draw and label the diagram of the following : 4+4=8

(i) Molecular structure of IgG

(ii) Cloverleaf model of tRNA

(c) Write short notes on any *three* of the following : 5×3=15

(i) *Lac* operon

(ii) Regulation of gene expression

(iii) Major histocompatibility complex (MHC)

(iv) Vaccines and vaccinations

2. Explain Watson and Crick model of DNA with appropriate diagram. 10

3. Elaborate the major steps in the synthesis of a polypeptide chain. 10

4. Discuss primary and secondary lymphoid organs and write, in brief, the antigen-antibody reaction. 6+4=10

★ ★ ★