

**TDC Odd Semester Exam., 2020**  
held in July, 2021

ZOOLOGY  
( Honours )

( 5th Semester )

Course No. : ZOOH-501

( **Developmental Biology, Molecular Biology  
and Immunology** )

Full Marks : 35  
Pass Marks : 12

Time : 2 hours

*The figures in the margin indicate full marks  
for the questions*

Answer **five** questions, taking **one** from each Unit

UNIT—I

1. (a) Define Gastrula. 1  
(b) Describe the gastrulation of Amphioxus with suitable illustration. 4+2=6
2. (a) Define extraembryonic membrane. 1  
(b) Describe different extraembryonic membranes present in mammal with suitable illustrations. 4+2=6

UNIT—II

3. (a) Write a brief note on the central dogma of molecular biology. 2  
(b) Describe the Watson and Crick's double-helical structure of DNA with suitable illustrations. 3+2=5
4. (a) Define DNA replication. 1  
(b) Describe the process of prokaryotic DNA replication with suitable illustration. 4+2=6

UNIT—III

5. (a) What is blotting technique? 1  
(b) Describe the process of Southern Blotting with suitable illustrations. 4+2=6
6. (a) What is translation? 1  
(b) Describe different steps of translation with suitable illustration. 4+2=6

UNIT—IV

7. (a) Define adaptive immunity. 1  
(b) Describe different types of cells of immune system with suitable illustrations. 4+2=6

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8. (a) What is immunoglobulin? 1  
(b) Describe the structure of immunoglobulin G (IgG) with suitable illustration. 4+2=6

UNIT—V

9. (a) Define immune response. 1  
(b) Describe humoral immunity with suitable illustration. 4+2=6
10. (a) What is AIDS? 1  
(b) Describe the possible pathways of transmission of AIDS. Add a note on the preventive measures of AIDS. 4+2=6

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