

S.No. 7371

PN 15 ZO 4

(For candidates admitted from 2015–2016 onwards)

M.Sc. DEGREE EXAMINATION, NOVEMBER 2023.

Zoology

DEVELOPMENTAL BIOLOGY AND IMMUNOLOGY

Time : Three hours

Maximum : 100 marks

SECTION A — (10 × 2 = 20)

Answer ALL questions.

1. Progenitor cell
2. Differentiation
3. Pluripotency
4. Mesodermal derivatives
5. Metamorphosis
6. Blastema formation
7. GALT
8. Macrophages
9. HLA
10. Immunoglobulin

SECTION B — ($5 \times 7 = 35$)

Answer ALL questions.

11. (a) Write about the structure of female gamete.

Or

- (b) What is the process involved in cell differentiation and determination?

12. (a) Write short note on formation of germ layers.

Or

- (b) What are all the patterns of embryonic cleavage?

13. (a) What are all the influence of hormones in metamorphosis of insects?

Or

- (b) Discuss in short about the metamorphosis.

14. (a) Give an account on structure and functions of bone marrow.

Or

- (b) Briefly explain the cells of the immune system.

15. (a) Briefly explain about the immune response against bacterial diseases.

Or

- (b) Explain the two examples of autoimmune diseases.

SECTION C — ($3 \times 15 = 45$)

Answer any THREE questions.

16. Describe in detail about the fertilization.

17. Give detailed account on morphogenetic movements during cleavage and formation of extra embryonic membranes.

18. Discuss in detail about the alterations and gene regulation of aging during development.

19. Explain in detail – origin and differentiation of T and B cells.

20. Discuss about primary structure, classes, functions, synthesis of immunoglobulin.