Reg. No ..... Name **26U608**

B. Sc. DEGREE END SEMESTER EXAMINATION - MARCH 2026

SEMESTER 6 : ZOOLOGY

COURSE : **19U6CRZOO09 : REPRODUCTIVE AND DEVELOPMENTAL BIOLOGY**

(For Regular 2023 Admission and Supplementary 2022/ 2021/ 2020/ 2019 Admissions)

Time : Three Hours Max. Marks: 60

PART A

Answer All (1 mark each)

1. What is Chalaza?
2. What are seminiferous tubules and how do you characterise them?
3. Define Infiltration
4. Define Teratology.
5. What is ejaculation?
6. State the theory of epigenesis
7. Define pole cells.
8. What is hyperactivated sperm?

(1 x 8 = 8)

PART B

Answer any 6 (2 marks each)

9. Discuss how zona pellucida prevent polyspermy.
10. List out different types of teratogenic agents.
11. Discuss the relevance of CPAs in cryopreservation. Use examples.
12. Define Leuteal phase.
13. Reflect on the regenerative mechanism involved in the replacement of RBC.
14. Write about segment polarity gene with examples.
15. Comment on the different envelops in the structure of ovum.
16. What are the additional embryonic membranes found in the chick embryo?

(2 x 6 = 12)

PART C

Answer any 4 (4 marks each)

17. Discuss the process of oogenesis. Compare and contrast spermatogenesis and oogenesis.
18. Explain gastrulation and the various types of gastrulation.
19. Summarize the different stages occur in amphibian metamorphosis. Compare and contrast complete and incomplete metamorphosis.
20. Illustrate the process of blastulation in chick.
21. Write a brief note on frog notogenesis.
22. Write a short note on Maternal effect genes.

(4 x 4 = 16)

PART D

Answer any 2 (12 marks each)

23. Write an essay on male and female reproductive structures.
24. Write about the frog's cleavage, blastulation, and gastrulation.
25. Prepare a detailed essay on the applications of embryology.
26. Enumerate the types of regeneration based on cellular mechanism with suitable examples. Detail the process of retrogressive metamorphosis in ascidians.

(12 x 2 = 24)