

**SIXTH SEMESTER B.Sc. DEGREE EXAMINATION, APRIL 2023****(Regular/Improvement/Supplementary)****ZOOLOGY****GZOL6B11T: REPRODUCTIVE & DEVELOPMENTAL BIOLOGY****Time:2 Hours****Maximum Marks: 60****SECTION A: Answer the following questions. Each carries 2 marks****(Ceiling 20 Marks)**

1. Differentiate between oogenesis and spermatogenesis.
2. Comment on r and k selection.
3. What is natural contraception? Discuss any two methods of natural contraception.
4. Distinguish between trophoderm and inner cell mass.
5. Comment on spiral cleavage with an example.
6. What is epiboly?
7. What is sinus rhomboidalis and sinus terminalis?
8. Sketch and label, the typical ovum (hen's egg).
9. What is blastocyst?
10. Comment on totipotency and pluripotency with suitable examples.
11. What is obligatory parthenogenesis?
12. What is meant by restitution?

**SECTION B: Answer the following questions. Each carries 5 marks****(Ceiling 30 Marks)**

13. Comment on sex patterns in organisms.
14. Describe hormonal control of parturition and lactation.
15. Write an essay on assisted reproductive technologies.
16. With suitable examples describe the classification of eggs based on the distribution of yolk.
17. Explain the process of gastrulation in amphioxus.
18. Describe the structure and function of human placenta.
19. What are stem cells? Add a note on their properties, significance and applications.

**SECTION C: Answer any 1 question. Each carries 10 marks.**

20. Explain the morphogenetic movement and formation of germ layers in frog.
21. Write an essay on experiments on sea urchin embryos leading to the double gradient concept.

**(1 x 10 = 10 Marks)**