

B.Sc. (CBCS) DEGREE EXAMINATION,  
APRIL 2024.

Fifth Semester

Zoology - Core

DEVELOPMENTAL ZOOLOGY

(For those who joined in July 2021 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer.

1. Parthenogenesis is also called as \_\_\_\_\_.  
(a) Fertilization (b) Syngamy  
(c) Virgin birth (d) Fusion
2. Where does syngamy occur?  
(a) Terrestrial (b) Water  
(c) Outside the body (d) Inside the body

7. Embryonic stem cells are derived from \_\_\_\_\_ of the blastocyst.  
(a) Inner cell mass (b) Ectoderm  
(c) Blastocoel (d) Mesoderm
8. Embryonic stem cells are \_\_\_\_\_.  
(a) Pluripotent (b) Small  
(c) Large (d) Medium sized
9. What follows IVF?  
(a) Coitus (b) Embryo transfer  
(c) Embryo sacrifice (d) Embryo delivery
10. IVT stands for \_\_\_\_\_.  
(a) Intra uterine transfer  
(b) Inter uterine transfer  
(c) Intra uterine traction  
(d) Inter uterine traction

3. Development in fertilized egg starts from \_\_\_\_\_.  
(a) Fragmentation (b) Regeneration  
(c) Cleavage (d) Invagination
4. Blastopore is found in  
(a) Morula (b) Blastula  
(c) Gastrula (d) Neurula
5. The formation of brain and different sensory organs is called \_\_\_\_\_.  
(a) Metagenesis (b) Neurogenesis  
(c) Notogenesis (d) Mesogenesis
6. Human have \_\_\_\_\_.  
(a) Chorionic placenta  
(b) Haemo-chorial placenta  
(c) Endothelial-chorial placenta  
(d) All the above

PART B — (5 × 5 = 25 marks)

Answer ALL questions choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Describe structure of spermatozoa.  
Or  
(b) Summarize basic concepts of developmental zoology.
12. (a) Explain fate map of frog.  
Or  
(b) Describe the structure of Blastula of frog.
13. (a) Discuss the development of heart in frog.  
Or  
(b) Explain the development of mesonephric kidneys in frog.
14. (a) Comment on induction and competence.  
Or  
(b) Explain teratogenesis.

15. (a) Describe erythroblastosis foetalis.

Or

(b) Enumerate the causes and treatment of infertility.

PART C — (5 × 8 = 40 marks)

Answer ALL questions choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Write an account on parthenogenesis.

Or

(b) Explain mechanism of spermatogenesis.

17. (a) Write an essay on placentation in mammals.

Or

(b) Describe the development of brain in frog.

18. (a) Comment on regeneration.

Or

(b) Explain the nuclear transplantation in Acetabularia.

19. (a) Write measure of birth control.

Or

(b) Explain IVF in detail.

20. (a) Explain mechanism of gastrulation.

Or

(b) Discuss various patterns of cleavage.