

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION DECEMBER 2022
(Second Semester)

Branch – ZOOLOGY

EMBRYOLOGY

Time: Three Hours

Maximum: 50 Marks

SECTION-A (5 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(5 x 1 = 5)

1. During Oogenesis each diploid cell produces:
 - (i) Four functional eggs.
 - (ii) Two functional eggs and two polar bodies.
 - (iii) One functional egg and three polar bodies.
 - (iv) Four functional bodies.
2. This is also known as meroblastic cleavage.
 - (i) Partial
 - (ii) Unequal holoblastic
 - (iii) Equal holoblastic
 - (iv) Superficial
3. Which embryonic stage consists of a solid, compact mass of sixteen or more cells?
 - (i) The morula
 - (ii) The blastula
 - (iii) The blastocyst
 - (iv) The gastrula
4. The placenta or umbilical cord both are ----- for substances between the mother and the foetus.
 - (i) Nervous system
 - (ii) Transporting system
 - (iii) Spiracle system
 - (iv) Digestive gland
5. Which of the following cells have ability to give rise to specialized cell types and capable of renewing.
 - (i) Sertoli cells
 - (ii) Stem cells
 - (iii) Leydig cells
 - (iv) Bee cells

SECTION - B (15 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks

(5 x 3 = 15)

6. a. Write note on the various types of sperms.
OR
- b. What is fertilization? Explain it.
7. a. Describe the blastulation in frog.
OR
- b. Give a short notes on the organogenesis of heart in frog.
OR
8. a. Discuss the process of gastrulation.
OR
- b. Explain the extra embryonic membranes of Chick.
9. a. List out the various types of placenta in mammals.
OR
- b. Describe the sexual cycle of mammals.

Cont...

10. a. Write notes on embryo transfer in animals.

OR

b. Explain the Quadriparental hybrids in animals.

SECTION -C (30 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks

(5 x 6 = 30)

11.a. Write an essay on Spermatogenesis.

OR

b. Give an account on Parthenogenesis.

12.a. Discuss the fate-map and gastrulation in *Amphioxus*

OR

b. Write a detailed account on organogenesis of brain development in frog.

13.a. Give an account on embryonic induction in Vertebrates.

OR

b. List out the process of chick development during 72 and 96 hours of incubation.

14.a. Write an essay on embryogenesis in Rabbit.

OR

b. Describe the role of hormones and its impact on sexual cycle.

15.a. Explain the artificial insemination in mammals and its significance.

OR

b. Discuss the role of embryonic stem cells production with suitable example.

Z-Z-Z END