

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 2023
(Second Semester)

Branch – ZOOLOGY

DEVELOPMENTAL BIOLOGY/ EMBRYOLOGY

Time: Three Hours

Maximum: 50 Marks

SECTION-A (5 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(5 x 1 = 5)

- 1 Amphimixis is the union of
 - (i) Ovum
 - (ii) Cytoplasm
 - (iii) Sperm
 - (iv) Nucleus of sperm and ovum
- 2 The daughter cells formed as a result of cleavage is known as
 - (i) Blastocysts
 - (ii) Blastula
 - (iii) Blastomeres
 - (iv) Blastocoel
- 3 The cavity present in the blastula is called as
 - (i) Coelom
 - (ii) Blastocoel
 - (iii) Sinus
 - (iv) Blastopore
- 4 Which extra embryonic membrane encloses the embryo in a fluid filled cavity?
 - (i) Amnion
 - (ii) Chorion
 - (iii) Alantois
 - (iv) Yolksac
- 5 ZIFT is an acronym for
 - (i) Zygote intra fallopian transfer
 - (ii) Zygote inter fallopian transfer
 - (iii) Zygote internal fallopian transfer
 - (iv) Zygote infusion fallopian transfer

SECTION - B (15 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks

(5 x 3 = 15)

- 6 a Write on account on gametogenesis.
OR
b Outline the types of eggs.
- 7 a Bring out the importance of gastrulation in frog
OR
b State the events that occur during blastulation.
- 8 a Narrate the steps in embryonic induction in Vertebrates.
OR
b Organize the structure of an egg.

Cont...

9 a Outline the types of placenta in mammals.

OR

b Give a short note on IVF.

10 a Write an essay on embryonic stem cells.

OR

b What is embryo transfer?.

SECTION -C (30 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks

(5 x 6 = 30)

11 a Enumerate the process of fertilization with neat sketch.

OR

b Analyze the importance of parthenogenesis.

12 a Explain the gastrulation in *Amphioxus*.

OR

b Elucidate the development of brain in frog.

13 a Justify the role of nucleus in animal development.

OR

b Survey the extra embryonic membrane in chick.

14 a Elucidate the structure of an egg in rabbit with neat diagram.

OR

b Examine the importance of sexual cycle.

15 a Discuss the production of chimeric mice.

OR

b Discuss the artificial insemination with reference to manipulation of animal reproduction.

Z-Z-Z

END