Progressive Education Society's
Modern College of Arts, Science & Commerce (Autonomous)
Ganeshkhind, Pune – 16
End Semester Examination: April 2024
Faculty: Science and Technology

Program: B. Sc. Biotech (04) **Semester: IV** **SET: B**
Program (Specific): Biotechnology **Course Type: Core**
Class: S. Y. B. Sc. **Max. Marks: 35**
Name of the Course: Animal Development
Course Code: 23 BBT-404 **Time: 2 Hr**

Instructions to the candidate:

1) ***There are 4 sections in the question paper. Write each section on separate page.***
2) ***All Sections are compulsory.***
3) ***Figures to the right indicate full marks.***
4) ***Draw a well labelled diagram wherever necessary.***

SECTION: A

Q1) Answer any <u>FIVE</u> of the following questions (5/6) **5**

1. Define gametes.
2. Why zebrafish is a good model organism?
3. What is stereoblastula?
4. What do you understand by fate map?
5. Mention two examples of oligolecithal eggs.
6. Define differentiation.

SECTION: B

Q2) Answer any <u>FIVE</u> of the following questions (5/6) **10**

1. Explain the term secondary neurulation.
2. Write the significance of stem cells.
3. Explain morphallaxis regeneration.
4. Comment retinoic acid as a teratogen.
5. Enlist different types of theories of aging.
6. What do you mean by epiboly?

P.T.O.

SECTION: C

Q3) Answer any <u>TWO</u> of the following questions (2/4) **8**

1. Illustrate diagrammatically the process of spermatogenesis.
2. Explain different pathways of apoptosis.
3. Describe primary induction with example.
4. Elaborate on different patterns of cleavages.

SECTION: D

Q4) Answer any <u>TWO</u> of the following questions (2/4) **12**

1. With the help of well labelled diagram explain the anterior and posterior axis in *Drosophila*.
2. Define capacitation and explain in detail the mechanism of fast and slow block to polyspermy.
3. Explain the concept of cell lineage.
4. Describe gastrulation in *Drosophila*.