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

Program: BScGen03 **Semester: V** **SET: A**
Program (Specific): Zoology **Course Type: DSEC**
Class: T.Y. B.Sc **Max.Marks: 35**
Name of the Course: Developmental Biology
Course Code: 24-ZO-355 **Time: 2Hr**
Paper: V

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) Define or Explain **5**

I) Define growth.

II) Define fertilization.

III) Explain invagination.

IV) Define epigenesis.

V) Explain the term oogenesis.

Q2) Very short answer questions (Attempt any 4 out of 6) **4**

I) Define developmental biology.

II) Define blastulation.

III) Explain gastrula.

IV) Define primitive streak.

V) Explain the function of zona pellucida.

VI) Define acrosome.

SECTION: B

Q3) Short answer questions (Attempt any 4 out of 6) **8**

I) Draw a well-labelled diagram of T.S. of testis.

II) Comment on preformation theory.

III) Explain acrosome reaction.

IV) Enlist the scope of developmental biology.

V) Explain the concept of cleavage.

VI) Describe three germinal layers.

SECTION: C

Q4) Short answer questions (Attempt any 4 out of 6) **8**

I) Explain types of eggs based on amount of yolk.

II) Comment on planes of cleavage.

III) Explain primary organizer.

IV) Draw a well-labelled diagram of human ovum.

V) Explain the significance of fertilization.

VI) Describe the process of primitive streak development in chick embryo.

SECTION: D

Q5) Long answer type Questions (Attempt any 2 out of 4) **10**

I) Describe the process of spermatogenesis in detail.

II) Explain the mechanism of fast block to polyspermy.

III) Discuss blastulation in chick with a well-labelled diagram.

IV) Explain the concept of induction and competence with suitable example.