

**C293**

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Roll No. ....

## **MZO-509**

### **Development Biology**

M.Sc. Zoology (MZO-20)

2nd Semester Examination, 2022 (June)

**Time : 2 Hours]**

**Max. Marks : 40**

**Note :** This paper is of Forty (40) marks divided into two (02) Sections A and B. Attempt the questions contained in these sections according to the detailed instructions given therein.

### **SECTION–A**

#### **(Long Answer Type Questions)**

**Note :** Section 'A' contains Five (05) long answer type questions of Ten (10) marks each. Learners are required to answer any Two (02) questions only.

(2×10=20)

1. What is the Segmentation? Write about the segmentation during the development.

2. Explain in detail the biochemical reaction of fertilization.
3. What do you understand by Holoblastic & Meroblastic cleavage?
4. Discuss the three embryonic germ layers in the vertebrates & how different organs are formed from these germ layers.
5. What is the regeneration, write about the significance of regeneration?

### **SECTION-B**

#### **(Short Answer Type Questions)**

**Note :** Section 'B' contains Eight (08) short answer type questions of Five (05) marks each. Learners are required to answer any Four (04) questions only. (4×5=20)

1. Explain the events of post fertilization.
2. Explain the process of gastrulation in Amphibians.
3. What is the morphogenesis. Explain the process of morphogenesis.
4. Write a short note on :
  - (a) Totipotent.
  - (b) Stem cell.

5. Explain the axis specification in vertebrates.
  6. Briefly explain the :
    - (a) Biocide Protein.
    - (b) Axes & Germ Layers.
  7. Explain the limbless & legless mutation.
  8. What is the aging? Give reason for aging.
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