A-925

Total Pages : 3 **Roll No. ----------**

MZO-509

Development Biology

M.Sc. Zoology (MSCZO)

2nd Semester Examination 2024 (June)

Time: 2:00 hrs Max. Marks: 35

Note : This paper is of Thirty Five (35) marks divided into Two (02) Section A and B. Attempt the questions contained in these sections according to the detailed given therein. Candidates should limit their answers to the questions on the given answer sheet. No additional (B) answer sheet will be issued.

P.T.O.

Section-A (Long-Answer-Type Questions)

Note : Section 'A' contains Five (05) long-answer-type questions of Nine and Half (9½) marks each. Learners are required to answer any Two (02) questions only.

[2x9½=19]

Q.1. Write in detail about the biochemistry of fertilization.

Q.2. What is apoptosis or programmed cell death? Write the importance of apoptosis in an organism.

Q.3. Explain the development of segmentation in Drosophila.

Q.4. What is neurulation? Explain the primary and secondary neurulation.

Q.5. What is morphogenesis? Explain the process of morphogenesis.

Section-B (Short-Answer-Type Questions)

Note : Section 'B' contains Eight (08) short-answer-type questions of Four (04) marks each. Learners are required to answer any Four (04) questions only.

[4x4=16]

Q.1. Describe various types of eggs based on yolk characteristics.

Q.2. Explain process of gastrulation in:

a. Amphioxus

b. Amphibia

Q.3. Explain the role of hox genes in the evolution of tetrapod limb.

Q.4. Describe the changes involved in cells during embryonic differentiation.

Q.5. Write a note on

a. Acrosomal reaction

b. Slow block polyspermy

Q.6. What is regeneration? Write about the significance of regeneration.

Q.7. What is teratogenesis? What is the role of teratogen on abnormal development?

Q.8. Discus the cellular mechanism during gastrulation.

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