

Online- Set 1

Format of Cover Page – Online Examination

Mode of Examination: Online

Unique Paper Code	: 42231202_OC
Name of the Paper	: Comparative Anatomy and Developmental Biology of Vertebrates
Name of the Course	: B.Sc. (P) Life Sciences, CBCS
Semester	: II
Duration	: 2hrs
Maximum Marks	: 75

Instruction for Students

Write your Roll No., Name of the paper, Course, Semester, and Date of examination on the first page of answer sheet.

Attempt **ANY FOUR** questions. All questions carry equal marks.

1. With the help of labeled diagrams compare the passage of the gametes in male and female vertebrates. Add a note on the structures formed by the fusion of the caudal part of the oviduct in therian mammals.
2. What type of changes has been taken in various groups of amniotes over the anamniotes with respect to aortic arches? Explain it with the help of labeled diagrams.
3. Give a detailed account on the evolution of organs responsible for removal of nitrogenous waste materials from the vertebrate body in correlation to their habit and habitat.
4. Eggs of eutherian mammals does not possesses sufficient amount of yolk to nourish their embryos. However, in the due course of evolution they developed a specialized structure which can overcome this deficiency. Explain the formation of this structure and elaborate the differences in its shape, types of tissues involved in its formation with suitable examples. How this structure supports the progresses of embryo?
5. Describe how various formative movements' results in the development of primitive organ precursors, in lower vertebrates?
6. In human a single diploid germ cell produces four haploid male gametes. Discuss the sequence of events that take place during this process. Enumerate various architectural changes in the nucleus and cytoplasm that leads to the differentiation and maturation of male gamete.