

Total No. of Printed Pages: 02

**B. Sc. Course (CBCS) Ordinance Sem-VI
EXAMINATION APRIL 2023
ZOOLOGY - DEVELOPMENTAL BIOLOGY**

[Time: 2 Hours]

[Max. Marks: 80]

- Instructions:**
1. All questions are compulsory.
 2. Figures to the right indicate maximum marks to the question.
 3. Draw diagram wherever necessary.
 4. Sub-question 'B' is compulsory from Q.III to Q. VI

Q.I. Answer any four of the following questions:

4×4=16marks

- a. Give a concise report on the 'Scope of Embryology'.
- b. Write a brief note on the process of 'Cortical reaction' during an activation of ovum at the time of Fertilization.
- c. 'Primary organizer plays an important role in Embryonic Induction'. Justify.
- d. Summarize the process of 'Somite formation' in Chick Embryo.
- e. Differentiate between Chorio-Vitelline Placenta and Chorio-Allantoic Placenta.
- f. Present any two 'theories of Ageing'.

Q.II. Write a note on any four of the following:

4×4=16marks

- i. Vitellogenesis
- ii. Present the scheme of Egg Classification.
- iii. Spemann's and Mangold's experiment.
- iv. Cleavage in Chick embryo.
- v. Fate of Somites in Chick Embryo.
- vi. ZIFT as an Assisted Reproductive Technology

Q.III.

A. What is a 'Fate map'? Describe the Artificial method of construction of Fate map in Embryo.

6 marks

OR

A. Discuss the process of 'Spermatogenesis'.

6 marks

- B. Give a detailed account of 'Natural Parthenogenesis' in animals. **6 marks**
- Q.IV.** A. Describe the development, structure and function of 'Amnion in Chick Embryo'. **6 marks**

OR

- A. Outline the fate of three Primordial Germ layers in an embryo. **6 marks**
- B. Explain the Development of Eye as an example of Sequential Induction. **6 marks**
- Q.V.** A. With the help of neat labeled diagram, describe the Development of 24 hour old Chick Embryo. **6 marks**

OR

- A. Trace the development of Brain in Chick Embryo upto 72 hours of incubation. **6 marks**
- B. What is a 'Test tube baby'? Discuss the technique involved. **6 marks**
- Q.VI.** A. Explain the mechanisms of 'Stimulus and Suppression of Regeneration'. **6 marks**

OR

- A. Discuss the mechanism of Regeneration. **6 marks**
- B. Write a note on the following: **6 marks**
- a. Fraternal twins
 - b. Causes of Infertility in male