

**NRT/KS/19/2083**

**Bachelor of Science (B.Sc.) Semester—III Examination**  
**ZOOLOGY (Life and Diversity of Animals-Chordatas)**  
**(Protochordata to Amphibia)**

**Optional Paper—I**

Time : Three Hours]

[Maximum Marks : 50

- N.B. :—** (1) All questions are compulsory.  
(2) All questions carry equal marks.  
(3) Illustrate your answer with suitable diagrams.

1. Describe the circulatory system of *Amphioxus* in detail. 10  
**OR**  
Write notes on :  
(A) General characters of Protochordata 5  
(B) Ascidian tadpole. 5
2. Explain parental care in Amphibia with suitable examples. 10  
**OR**  
Write notes on :  
(A) Migration in fishes 5  
(B) Origin of paired fins in fishes. 5
3. Describe the post-fertilization development in fishes upto the gastrula stage. 10  
**OR**  
Write notes on :  
(A) Different types of eggs based on amount and position of yolk 5  
(B) Types of scales of fishes. 5
4. Give an account on development of respiratory organs in frog. 10  
**OR**  
Write notes on :  
(A) Cleavage in frogs 5  
(B) Morphogenetic movements in gastrula of frog. 5
5. Write 4 or 5 lines on the following (any TEN) :  
(i) Ascidiacea  
(ii) Retrogressive metamorphosis  
(iii) *Myxine*  
(iv) Arborescent organ  
(v) Chondrichthyes  
(vi) Urodela  
(vii) Oogenesis  
(viii) Acrosome  
(ix) Cortical reaction  
(x) Yolk plug  
(xi) Neural ectoderm  
(xii) Visceral arch. 10