

4. (a) Explain the process of osmoregulation in fishes detailing the mechanisms used by freshwater and marine species to maintain water and salt balance. (10)
- (b) Describe the biting mechanism in snakes highlighting the structure and function involved. (5)
5. (a) Discuss the adaptations for flight in birds explaining the structural and physiological modifications that enhance flight efficiency. (9)
- (b) Describe parental care in amphibians its various forms with examples. (6)
6. Write short notes on Any **Three** of the following topics : (3×5=15)
- (i) Metamerism in Annelida
 - (ii) Retrogressive metamorphosis in Protochordates
 - (iii) Locomotion in Amoeboids
 - (iv) Origin of Mammals
 - (v) Metamorphosis in Insects

(1000)

~~[This question paper contains 4 printed pages.]~~

Your Roll No.....

Sr. No. of Question Paper : 1568

I

Unique Paper Code : 2232521101

Name of the Paper : Diversity of Animals (DSC-3)

Name of the Course : **B.Sc. (P) Life Science NEP-UGCF**

Semester : I

Duration : 2 Hours

Maximum Marks : 60

Instructions for Candidates

1. Write your Roll No. on the top immediately on receipt of this question paper.
2. Attempt **FOUR** questions in all.
3. Question No. 1 which is compulsory.
4. Illustrate your answers with diagram wherever necessary.

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1. (a) Define the following terms (Any Five) : (5)

- (i) Cephalization
- (ii) Endothermy
- (iii) Catadromous migration
- (iv) Strobilation
- (v) Binomial nomenclature
- (vi) Stone canal

(b) Give the scientific name of the following terms
(Any Four) : (2)

- (i) Acorn worm
- (ii) Saw fish
- (iii) Portuguese man-of-war
- (iv) Feather star
- (v) Tree frog

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(c) Distinguish between the following terms (Any Four) : (2×4=8)

- (i) Protostomes and deuterostomes
- (ii) Pseudocoelomate and coelomate animals
- (iii) Apposition and superposition vision
- (iv) Torsion and detorsion
- (v) Flagella and cilia

2. (a) Outline the life cycle of *Ascaris lumbricoides* and include a brief note on its adaptations for parasitism. (6+3=9)

(b) Describe the phenomenon of polymorphism in Hydrozoa highlighting its types and functions within the colony. (6)

3. (a) Explain the types of canal systems found in Porifera describing their structure and functions. (8)

(b) Describe the process of pearl formation in molluscs. (7)

P.T.O.