

**CARMEL COLLEGE OF ARTS, SCIENCE & COMMERCE FOR WOMEN,
NUVEM-GOA
SEMESTER END EXAMINATION, APRIL-MAY 2023**

Sem. II of B.Sc. Zoology

Class & Div.: F Y BSc (A & B)

Course name & Code: Diversity of Chordates & Genetics (ZOC 102)

Maximum marks: 80 Date: 02/05/2023 Duration: 02 hrs. Total No of pages: 2

Instructions: 1. All questions are compulsory

2. Figures to the right indicate marks

3. Draw a neat labelled diagrams whenever necessary

Q1. Answer any four of the following. (16)

- i. List the General features of 'Protochordates'.
- ii. Enlist the salient features of 'Order Dipnoi'.
- iii. List any two orders of sub-class Lissamphibia with their characteristic features and an example of each.
- iv. Differentiate between 'Venomous and Non-venomous snakes'.
- v. Elaborate the various strategies involved in 'migration of birds'.
- vi. Give an account of 'origin of Mammals'.

Q2. Answer any four of the following. (16)

- a. Differentiate between 'multiple gene and multiple alleles' by giving examples.
- b. State Mendel's three laws of inheritance.
- c. Write down the difference between 'Natural and Induced mutations'. Give examples for each.
- d. Comment on types of 'Inbreeding in Genetics'.
- e. What is 'Heterosis'? Comment on its manifestation.
- f. Write a short note on 'polydactyly in humans'.

Q3. A) Classify Cyclostomes up to classes giving an example and a feature of each. (6)

OR

A) Write a note on 'parental care in Fishes'.

B) Describe the 'General features of Class Amphibia'. (6)

Q4. A) Discuss the general features of class Reptilia. (6)

OR

A) Write two features of any six orders of Super Order Palaeognathae. Give an example of representative of each order with its scientific name.

B) Discuss the 'salient features of any two orders of Mammals'. (6)

Q5. A child has blood group O. If the father has blood group A and the mother's blood group is B, work out the genotypes of the parents and the possible genotypes of the other offsprings. (6)

OR

A) Differentiate between the following with examples:

- a. Homozygous and heterozygous traits
- b. Monohybrid and dihybrid

B) Illustrate and describe the 'structure of nucleosome'. (6)

Q6. A) Give a concise account of 'Giant chromosome'. (6)

OR

A) Classify the different types of mutations on the basis on structural changes in chromosomes.

B) Write a short note on Negative Eugenics. (6)