



Seat No. _____

HAK-003-2013020
Second Year B. Sc. (Sem. III) (CBCS)
(W.E.F. 2019) Examination
May - 2023
Zoology : Paper - Z - 03
(Non Chordate : Systematic, Forms & Functions,
Cell Biology & Genetics) (New Course)

Faculty Code : 003

Subject Code : 2013020

Time : $2\frac{1}{2}$ / Total Marks : 70

Instruction:

- (1) Draw neat and labeled diagram wherever necessary.
- (2) Figures to the right side indicate full marks of the question.

- 1 (A) Give the answers of following questions : 4
- (1) Give the name of the phylum of animal Nereis.
 - (2) Give the name of Locomotary organ in Amoeba.
 - (3) How many pair of legs in Grasshopper?
 - (4) Give the name of the class of Paramecium.
- (B) Write any one out of two : 2
- (1) Classify the animal Ophiocoma (Brittle star) reasons are not necessary.
 - (2) Characters of Class Demospongia. ,
- (C) Write any one out of two : 3
- (1) Classify the animal Gorgonia with giving reasons.
 - (2) Characters of Phylum - Arthropoda.
- (D) Write any one out of two : 5
- (1) Draw a non-chordate classification chart with examples of each phylum.
 - (2) Characteristics of phylum Mollusca.

- 2 (A) Give the answer of following questions : 4
- (1) Which type of mouth parts found in cockroach?
 - (2) Scientific name of Leech.
 - (3) In which segment clitellum is situated in Leech?
 - (4) How many total segments having in Leech?
- (B) Write any one out of two : 2
- (1) Sponging type (House fly) mouth parts.
 - (2) Explain Jaw of Leech.
- (C) Write any one out of two : 3
- (1) Draw neat and clean Labeled diagram of Nervous system of Leech.
 - (2) Explain Salivary gland of Leech.
- (D) Write any one out of two : 5
- (1) Explain Digestive system of Leech.
 - (2) Siphoning type (Butter fly) mouth parts.
- 3 (A) Give the answer of following questions : 4
- (1) Give the any two name of types of Lysosomes.
 - (2) Give the example of cytoplasmic inheritance.
 - (3) Give the size of Centrioles.
 - (4) Give difference between Killer and sensitive Paramecium.
- (B) Write any one out of two : 2
- (1) Function of Lysosome.
 - (2) Sex determination in Human.
- (C) Write any one out of two : 3
- (1) Notes on Ribosome.
 - (2) Explain Human chromosome karyotyping.
- (D) Write any one out of two : 5
- (1) Structure and function of Golgi body,
 - (2) Types of chromosomes according to centromere.

- 4 (A) Give the answers of following questions : 4
- (1) How many cast are found in Honey bee?
 - (2) Which type of eggs are found in Amphioxus?
 - (3) Which behavior exhibited by Termite?
 - (4) Which type of eggs are found in frog?
- (B) Write any one out of two : 2
- (1) Types of eggs based on amount of yolk.
 - (2) Social behavior in Honey bee in brief
- (C) Write any one out of two : 3
- (1) Parental care behavior in Arius, Ichthyophis and Alytes.
 - (2) Types of eggs based on distribution of yolk.
- (D) Write any one out of two : 5
- (1) Courtship & Reproductive behavior in Spider, Scorpion and Peacock.
 - (2) Types of cleavage.
- 5 (A) Give the answer of following questions : 4
- (1) What is Allopartic speciation?
 - (2) Define Geographical Isolation.
 - (3) Neo Darwinism theory in brief.
 - (4) 'Natural Selection' in brief.
- (B) Write any one out of two : 2
- (1) Define the Speciation.
 - (2) Explain Lemarkism in brief.
- (C) Write any one out of two : 3
- (1) Explain Analogous organs.
 - (2) Explain sympatric Speciation.
- (D) Write any one out of two : 5
- (1) Describe Homologous organs.
 - (2) Explain Darwinism with example.