

BZYCT-131

ASSIGNMENT BOOKLET

Bachelor's Degree Programme

(BSCG)

ANIMAL DIVERSITY

Valid from 1st January, 2023 to 31st December, 2023



**School of Sciences
Indira Gandhi National Open University
Maidan Garhi
New Delhi-110068**

(2023)

Dear Student,

Please read the section on assignments in the Programme Guide for Core Courses that we sent you after your enrolment. A weightage of 30 per cent, as you are aware, has been earmarked for continuous evaluation, **which would consist of one tutor-marked assignment** for this course. The assignment is in this booklet, and it consists of three parts, Part A, B and C. The total marks of all the parts are 100, of which 35% are needed to pass it.

Instructions for Formatting Your Assignments

Before attempting the assignment please read the following instructions carefully:

- 1) On top of the first page of your answer sheet, please write the details exactly in the following format:

ROLL NO.:

NAME:

ADDRESS:

.....

.....

COURSE CODE:

COURSE TITLE:

ASSIGNMENT NO.:

STUDY CENTRE: **DATE:**

PLEASE FOLLOW THE ABOVE FORMAT STRICTLY TO FACILITATE EVALUATION AND TO AVOID DELAY.

- 2) Use only foolscap size writing paper (but not of very thin variety) for writing your answers.
- 3) Leave 4 cm margin on the left, top and bottom of your answer sheet.
- 4) Your answers should be precise.
- 5) Complete each of Part A, Part B and Part C of this assignment separately, and **submit them together.**
- 6) The assignment answer sheets are to be submitted to your Study Centre as per the schedule made by the study centre. **Answer sheets received after the due date shall not be accepted.**

We strongly suggest that you retain a copy of your answer sheets.

- 7) **This assignment will remain valid from January 1, 2023 to December 31, 2023.** However, you are advised to submit it within **12 weeks** of receiving this booklet to accomplish its purpose as a teaching-tool. Answer sheets received after the due date shall not be accepted.
- 8) **You cannot fill the exam form for this course** till you have submitted this assignment.

We wish you good luck.

ASSIGNMENT ANIMAL DIVERSITY

Course Code: BZYCT-131
Assignment Code: BZYCT-131/TMA/2023
Maximum Marks: 100

Note: Attempt all questions. The marks for each question are indicated against it.

Part-A

Maximum Marks: 50

1. Answer the following:
 - a) What is the difference between dinoflagellates and apicomplexans? (2)
 - b) List three unique features of Phylum Ciliophora. (3)
 - c) Which of the following *is not* true for animals with radial symmetry? (1)
 - i) Non front and back ends
 - ii) Are always sessile
 - iii) No left or right sides
 - iv) Face the environment from all sides
 - d) Match the following: (4)

i) frontal plane	a) Divides body into left and right
ii) sagittal plane	b) Only one imaginary line divides the body into mirror images
iii) bilateral symmetry	c) Cannot be divided into mirror images
iv) asymmetrical	d) Divides body into dorsal and ventral parts
2. a) Complete the following sentences inserting appropriate words in blanks: (5)
 - i) Porifera are cellular animals incapable of as they remain to the substratum like a
 - ii) The sponge body is covered by an outer epithelial layer made up of
 - iii) Sponges with skeleton made up of spicules of calcium carbonate belong to the class
- b) Write true (T) or false (F) in the space provided against each statement. (5)
 - i) Cnidocyte has a hair like cnidocil which acts as a trigger.
 - ii) Medusae are asexual zooids.
 - iii) *Obelia* colony is bimorphic.
 - iv) *Obelia* is a fresh water plant like animal found attached to substratum.
 - v) Gonangium is a sexual way of reproduction.

3. Please attempt the following questions:
- i) Which of the words given in the parenthesis is correct? (1)
 Flame cells in platyhelminthes are in function.
 (excretory/osmoregulatory)
 - ii) Arrange the character most appropriate to the class of Platyhelminthes against it. (4)

Classes	Characters
a) Turbellaria	i) Presence of scolex
b) Monogenea	ii) Presence of oral and ventral suckers, but no hooks
c) Trematoda	iii) Presence of posterior hooks, suckers, clamps etc.
d) Cestoda	iv) Ciliated epidermal cells covering the body.
 - iii) What do you mean by true coelomates? Discuss their advantages. (5)
4. a) Choose the correct word from the alternative given: (3)
- i) Trilobites are an extinct group of **primitive/advanced** arthropods.
 - ii) Spiders, ticks, mites and scorpions are included under the class **Eurypterida/Arachnida**.
 - iii) Spinning organs or spinnerets are characteristic of **Araneae/Acarina**.
- b) Indicate whether the following statements are 'True' or 'False'. (2)
- i) There are six pairs of appendages in the head of crustaceans corresponding to six segments.
 - ii) Malacostracans account for over 60% of all the crustaceans.
- c) Write short notes on: (5)
- i) Compound eye of insects
 - ii) Moulting in insects
5. a) State whether the following statements are 'True' or 'False': (4)
- i) Bivalves have adapted for filter feeding methods.
 - ii) The blood of cephalopods contains haemocyanin.
 - iii) Cephalopods have one of the best developed nervous systems among invertebrates.
 - iv) Development in bivalves includes trochophore and veliger larvae.
- b) Fill in the blanks with suitable words: (6)
- i) is the only living genus under the subclass Nautiloidea.
 - ii) The mantle is innervated by ganglia.
 - iii) The endoskeleton of most echinoderms is formed of

- iv) In echinoderms the system of coelomic canals and tube feet is called,,, system.
- v) The larval stages of asteroids are and

Part-B

Maximum Marks: 50

- 6. a) Correct the given statements. (4)
 - i) Presence of cranium and paired appendages is a characteristic feature of Agnatha.
 - ii) In jawless fishes heart is a single chambered structure.
 - iii) Development in hagfishes includes a larval stage called ammocoetes.
 - iv) Special mucous glands are present in *Petromyzon*.
- b) Why do marine teleosts need to drink large amounts of seawater? (3)
- c) How do the freshwater teleosts overcome their osmoregulatory challenges? (3)
- 7. i) Describe parental care in amphibians. (5)
- ii) Distinguish between anurans and urodeles. (5)
- 8. a) Describe the distinguishing features of turtles of Order Testudines. (4)
- b) How are tuataras different from lizards? (2)
- c) Describe two anatomical features of lizards (including legless members) that distinguish them from snakes. (2)
- d) How do crocodiles and alligators differ from each other? (2)
- 9. i) Where was the *Archaeopteryx* discovered? Give reasons for the *Archaeopteryx* being considered the connecting link between reptiles and birds. (5)
- ii) Explain the role of drag and thrust in bird flight. (5)
- 10. a) State whether the following statements are True (T) or False (F). (5)
 - i) Elephants are the largest land animals.
 - ii) Blubber is found in monkeys.
 - iii) Carnivores are grass eating mammals.
 - iv) Kangaroos are egg laying mammals.
 - v) Monotremes are viviparous.
- b) Differentiate between Artiodactyla and Perissodactyla. (2)
- c) Give one distinguishing morphological feature of each of the following orders: (3)
 - i) Cingulata
 - ii) Sirenia
 - iii) Primate