

**BZYCT-133**

# **ASSIGNMENT BOOKLET**

**Bachelor's Degree Programme**

**(BSCG)**

**(Comparative anatomy and Developmental Biology of Vertebrates)**

**Valid from 1<sup>st</sup> January, 2020 to 31<sup>st</sup> December, 2020**



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

**(2020)**

Dear Student,

Please read the section on assignments in the Programme Guide for B. Sc. 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 two parts, Part A and B. 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) Solve Part A and Part B of this assignment, and **submit the complete assignment answer sheets within the due date.**
- 6) The assignment answer sheets are to be submitted to your Study Centre within the due date. **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 is **valid from 1<sup>st</sup> January, 2020 to 31<sup>st</sup> December, 2020.** If you have failed in this assignment or fail to submit it by June, 2020, then you need to get the assignment for the year 2020-21, and submit it as per the instructions given in the Programme Guide.
- 8) **You cannot fill the examination form for this course** until you have submitted this assignment.

We wish you good luck.

## ASSIGNMENT

Course Code: BZYCT-133  
Assignment Code: BZYCT-133/TMA/2020  
Maximum Marks: 100

- Note: Attempt all questions. The marks for each question are indicated against it.**
- |   | Marks     |
|---|-----------|
| 1. Differentiate between the following pairs:   | (2×5=10)  |
| i) holoblastic and meroblastic cleavage   |           |
| ii) Blastula and blastocyst   |           |
| iii) Horn and antler  |           |
| iv) Monophyodont and polyphyodont dentition   |           |
| v) Microglia and macroglia  |           |
| 2. With the help of a labelled diagram describe the three phases of spermatogenesis in vertebrates. | (10)      |
| 3. Describe with the help of suitable diagrams the process of neural tube formation in frog embryo. | (10)      |
| 4. Write short notes( in about 500 words) on the following:   | (4×5)=20  |
| i) Cell signaling during embryonic developments   |           |
| ii) Phylogeny and succession and of kidneys in vertebrates  |           |
| iii) Respiration in cartilaginous fishes  |           |
| iv) Thyroid, the endocrine gland of metabolism in mammals   |           |
| 5. a) Describe the various types of vertebrae that occur in the vertebral column of vertebrates.    | (5×2 =10) |
| b) Give an account of the digestive system of birds   |           |
| 6. List the various types of morphogenetic movements and describe any two of them.                  | (10)      |
| 7. Discuss the endothermic heart of a mammal  | (10)      |
| 8. Describe the spinal cord of vertebrates.   | (10)      |
| 9. Describe the vestibular apparatus of mammals.  | (10)      |