**BZYCT-143**

**ASSIGNMENT BOOKLET**

**Bachelor's Degree Programme**

# (BSCG)
# INSECT VECTORS AND VECTOR BORNE DISEASES

**Valid from 1st January, 2025 to 31st December, 2025**

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

**(2025)**

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 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) Complete each of Part A and Part B 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 is **valid from 1st January, 2025 to 31st December, 2025**. If you have failed in this assignment or fail to submit it by December, 2025, then you need to get the assignment for the year 2026, and submit it as per the instructions given in the Programme Guide.

8) **You cannot fill the exam form for this course** till you have submitted this assignment.

We wish you good luck.

# ASSIGNMENT
# (Tutor Marked Assignment)

**Course Code: BZYET-143**
**Assignment Code: BZYET-143/TMA/2025**
**Maximum Marks: 100**

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

1. Which structural, developmental and behavioristic characteristics make insects highly successful organisms on Earth? Explain. (10)

2. Write short notes on the following: (10)

   i) Mouthpart modifications in insects

   ii) Types of antennae in insects

   iii) Leg modification in insects

   iv) Typical structure of the wing

3. Discuss the reproduction and metamorphosis in insects. (10)

4. Distinguish between the following insect orders based on the clue given in parentheses. (10)

   i) Mallophaga and Anoplura (Mouth parts)

   ii) Heteroptera and Homoptera (Forewings)

   iii) Diptera and Strepsiptera (Reduced wings)

   iv) Isoptera and Hymenoptera (Joining of thorax and abdomen)

5. a) Explain vector-pathogen relationship. (5)

   b) Differentiate between: (5)

      i) Propagative Transmission and Cyclopropagative Transmission

      ii) Cyclodevelopmental Transmission and Vertical Transmission

6. Name four insect orders which are of medical importance. Write at least one conspicuous feature and three examples of each order. (10)

7. Explain the epidemiology of malarial parasite. (10)

8. Draw a labeled diagram of: (3+3+4)

   a) Life cycle of *Aedes* mosquito

   b) Dengue transmission Cycle

   c) Zika Transmission Cycle

9. Write short notes on: (10)

   a) Traps used for controlling houseflies

   b) Cultural control of *Musca*

c) Chemical control of housefly

d) Myiasis

10. a) Explain the concept of Integrated Vector Management. (5)

b) How can the disease vectors be genetically manipulated to reduce their population? (5)