

BZYET-141

ASSIGNMENT BOOKLET

Bachelor's Degree Programme

(BSCG)

(Immunology)

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 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 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 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 examination form for this course** until you have submitted this assignment.

We wish you good luck.

ASSIGNMENT

Course Code: BZYET-141
Assignment Code: BZYET-141/TMA/2025
Maximum Marks: 100

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

1. a) List various innate immune system barriers and protection mechanisms. (5×2=10)
b) Give a brief account of the secondary lymphoid organs of the Immune System.
2. a) What is immune deficiency? Explain how our immune system prevents autoimmunity? (5×2=10)
b) What are the different types of hypersensitivity, according to Gell and Coombs? Briefly explain.
3. Define the following terms: (2½×4=10)
 - i) Mucosa Associated Lymphoid Tissue (MALT)
 - ii) Haematopoiesis
 - iii) Hinge region of the antibody
 - iv) Human Leucocyte Antigen (HLA)
4. Write short notes on the following: (2½×4=10)
 - i) Monoclonal antibodies
 - ii) Opsonization
 - iii) DNA Vaccines
 - iv) Agglutination Reactions
5. Differentiate between the following pairs of terms: (2½×4=10)
 - i) Helper “T” cells and cytotoxic “T” cells
 - ii) Active and Passive immunity
 - iii) MHC class-I and II molecules
 - iv) Self and non-self antigens
6. What is the vaccine? Explain the mode of action of vaccine. Write about the advantages and disadvantages of vaccination. (10)
7. a) Write the various steps in the establishment of bacterial infection. (5×2=10)
b) Explain the neutralization mechanism of bacteria by antibodies.
8. a) Define autoimmunity. Describe any two autoimmune disorders. (5×2=10)

- b) Describe the steps involved in the immunoelectrophoresis technique.
9. a) Define antibodies and draw the structure of immunoglobulin. (5×2=10)
- b) Explain the significance of the different classes of antibodies.
10. How is the classical complement pathway activated? Discuss with a suitable diagram. (10)