

**BZYET-141**

# **ASSIGNMENT BOOKLET**

**Bachelor's Degree Programme**

**(BSCG)**

**(Immunology)**

**Valid from 1<sup>st</sup> January, 2024 to 31<sup>st</sup> December, 2024**



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

**(2024)**

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 1<sup>st</sup> January, 2024 to 31<sup>st</sup> December, 2024.** If you have failed in this assignment or fail to submit it by December, 2024, then you need to get the assignment for the year 2025, 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/2024  
Maximum Marks: 100

---

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

1. Define the following terms: (2½×4=10)
  - i) Epitope
  - ii) Autoimmunity
  - iii) Heavy chain of antibody
  - iv) Agglutination
2. Write short notes on the following: (2½×4=10)
  - i) Phagocytosis
  - ii) Bursa of Fabricius
  - iii) RNA Vaccines
  - iv) Opsonisation
3. Differentiate between the following pairs of terms: (2½×4=10)
  - i) MHC class-I and II molecules
  - ii) B cell and T cell
  - iii) Active immunity and Passive immunity
  - iv) Allergy and Hypersensitivity
4. a) Write any five function of macrophage. (5×2=10)  
b) How does antigen lysis occur by alternate pathway of the complement system? Discuss in brief.
5. Explain any three immunological techniques with suitable examples and diagram. (10)
6. Discuss different cytokines that act as mediators of innate and adaptive immune systems. (10)
7. a) Describe the major events of the B-Cell maturation brief. (5×2=10)  
b) Explain the neutralization mechanism of bacteria by antibodies.
8. a) What are the different types of hypersensitivity according to Gell and Coombs? (5×2=10)  
b) Explain the principles of ELISA (Enzyme Linked Immunosorbent Assay).

9. a) Define antibodies and draw the structure of immunoglobulin with labelled diagram. (5×2=10)
- b) Explain the significance of the different classes of antibodies.
10. Describe the structure of bone marrow with a neat and well-labelled diagram. (10)