

FIFTH SEMESTER B.Sc. DEGREE EXAMINATION, NOVEMBER 2015

(UG—CCSS)

Core Course—Biotechnology

BT 5B 02—IMMUNOLOGY AND IMMUNOTECHNOLOGY

Time : Three Hours

Maximum : 30 Weightage

I. Objective Type Questions. Answer *all* questions :

A. True or False :

- 1 Antibody mediated **immune** responses are termed **humoral** responses.
- 2 GALT is a **primary** lymphoid tissue.
- 3 **NK** cells are **cytotoxic** cells.
- 4 **Opsonization** greatly increases the efficiency of **phagocytosis**.
- 5 **Dendritic** cells are antigen presenting cells.
- 6 Type II hypersensitivity is also known as immediate hypersensitivity.

B. Name the following :

- 7 Antigen that can generate an immune response.
- 8 The most abundant **immunoglobulin** in the serum.
- 9 The **immunoglobulin** that can cross the placenta.
- 10 Name one recombinant vaccine.
- 11 Name an **immunosuppressive** drug.
- 12 Name one organ specific auto-immune disease.

(12 x 3 = 36 weightage)

II. Short Answer Type Questions. Answer all *nine* questions :

- | | |
|----------------------------------|----------------------------------|
| 13 What is Sarcoma ? | 14 What is opsonization ? |
| 15 What are adjuvants ? | 16 What are CD markers ? |
| 17 What are interferons ? | 18 Grave's disease. |
| 19 Bombay group. | 20 Haptens . |
| 21 TNF a . | |

(9 x 1 = 9 weightage)

Turn over



III. Short Essay or Paragraph questions. Answer any *five* questions :

- 22 Immunologic tolerance.
- 23 Western blotting.
- 24 **Immunoglobulin superfamily.**
- 25 Tumor induction.
- 26 Cancer **immunotherapy.**
- 27 Recombinant vector vaccine production.
- 28 Organ specific auto-immunity.



(5 x 2 = 10 weighta

IV. Essay Questions. Answer any *two* questions :

- 29 Write an essay on different classes of **immunoglobulin**
- 30 What is adaptive immunity ? Explain the general properties of adaptive immunity.
- 31 Explain how antigen presenting cells act ?



(2 x 4 = 8 weightage)