

**D 6759**

**(Pages : 2)**

**Name**

**Reg. No.....**

**THIRD SEMESTER M.Sc. DEGREE EXAMINATION, DECEMBER 2016**

**(CUCSS)**

General Biotechnology

**GN 3C 4 – IMMUNOLOGY**

Time : Three Hours

Maximum : 36 Weightage

**Section A**

*Answer **all** questions.*

*Each question carries a weightage of 1.*

- |                         |                       |
|-------------------------|-----------------------|
| 1. Thymus.              | 2. MALT.              |
| 3. Cytokines.           | 4. CD4 + T cell.      |
| 5. C-reactive proteins. | 6. CD markers         |
| 7. Mitogen.             | 8. Delayed hypersens. |
| 9. Complement.          | 10. Dendritic cells.  |

(10 x 1 = 10 weightage)

**Section B**

*Answer any **seven** questions.*

*Each question carries a weightage of 2.*

11. What are adjuvants? Explain the function and properties of adjuvants.
12. Discuss the role of macrophages in the antigen processing and presentation.
13. Distinguish isotypes, allotypes and idiotypes.
14. Describe the structure and function of IgG molecule.
15. Explain tumour evasion of immune system.
16. Explain the principle and procedure of Immunofloresence.
17. Describe the classical pathway of compliment activation.
18. Discuss the role of NK cells in body defence.
19. Describe the functions of T helper cells.
20. Give a note on cancer immunotherapy.

(7 x 2 = 14 weightage)

**Turn over**

## Section C

*Answer any two questions.*

*Each question carries a weightage of 6.*

21. Define Immunization. Discuss various active and passive immunization methods.
22. Write an essay on immunity against Bacterial, Viral and Fungal infection.
23. What are auto immune diseases? Discuss in detail any *two* organ specific **autoimmune** diseases.

(2 x 6 = 12 weightage)