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PG Even Semester (CBCS) Exam., May—2018

BIOTECHNOLOGY

(2nd Semester)

Course No. : BTYCC–201

(Immunology)

Full Marks : 70
Pass Marks : 28

Time : 3 hours

The figures in the margin indicate full marks for the questions

1. *(a)* What are the different barriers of non-specific immunity?

(b) Differentiate between active and passive immunization. 8+6=14

OR

2. *(a)* Discuss the role of phagocytes in mounting an immune response.

(b) Write brief notes on the following :

(i) NK cells

(ii) Opsonization 8+(3×2)=14

3. *(a)* Chalk out the steps of the alternate complement pathway.

(b) State the main functions of the cytokines IL-6 and TNF-α. 7+7=14

OR

4. *(a)* Give a short account on the structure and functions of IgG.

(b) What are plasma cells? How are they different from B-lymphocytes? 10+4=14

5. *(a)* Briefly state the mechanism of gene rearrangement in generating antibody diversity.

(b) Differentiate among isotypes, allotypes and idiotypes of antibodies. 8+6=14

OR

6. *(a)* Differentiate between the cytosolic and endocytic pathways of antigen processing and presentation.

(b) Write short notes on the following :

(i) Recombination signal sequences

(ii) Allelic exclusions 8+(3×2)=14

7. *(a)* Citing examples, differentiate between antibody-mediated and cellular hypersensitivity.

(b) Write short notes on the following :

(i) Hashimoto's thyroiditis

(ii) Myasthenia gravis 8+(3×2)=14

OR

8. *(a)* Differentiate between immune complex-mediated autoimmunity and T-cell-mediated autoimmunity.

(b) Write about tumor specific antigens in cancer. 8+6=14

9. *(a)* Differentiate between immune agglutination and immune precipitation.

(b) Discuss about the technique of ELISA. 6+8=14

OR

10. *(a)* Write short notes on the following :

(i) RIA

(ii) FACS

(b) Write in detail about the technique of immunoelectrophoresis. (4½×2)+5=14

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