

30/11/20
(29)

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -1 EXAMINATION- 2025

B.Tech-V Semester (BT)

Course Code(Credits): 18B11BT513 (4)

Max. Marks: 15

Course Name: Immunology

Course Instructors:Dr. Abhishek

Max. Time: 1 Hour

Note: All questions are compulsory. Marks are indicated against each question in square brackets.

Q.No	Question	CO	Marks
Q1	<p>Cell death is a conserved fundamental process that plays a central role in all aspects of life. It is involved in embryonic development, maintaining organismal homeostasis, and eliminating damaged cells. Cell death can be a regulated cell death or induced in response to physical damage and infection. Regulated cell death (RCD) is tightly regulated by intracellular signal transduction pathways; non-RCD is accidental and results from unexpected cell injury.</p> <p>a. Do you believe that Non Regulated Cell death is really important in the maintaining of Immuo-Homeostasis, Give detail justification of your answer?</p> <p>b. What do you think about the importance of Regulated Cell death in the maintenance of Immuno-homeostasis? Explain in detail with suitable ray diagram.</p> <p>a. The expression of several genes accompanies regulated cell death in leukocytes and other cell types. Some of the proteins specified by these genes induce regulated cell death, others are critical during apoptosis, and still others inhibit apoptosis. Explain the role of following gene in the regulation of apoptois.</p> <p>(i) bcl-2 (ii) bax (iii) bcl-X_L (iv) bcl-X_s</p>	CO-1	1+3+2
Q2	<p>Early in hematopoiesis, a multipotent stem cell differentiates along one of two pathways, giving rise to either a common lymphoid progenitor cell or a common myeloid progenitor cell. The types and amounts of growth factors in the microenvironment of a particular stem cell or progenitor cell control its differentiation. During the development of the lymphoid and myeloid lineages, stem cells differentiate into progenitor cells,</p> <p>a. Illustrate and discuss all the immune cells arise from Lymphoid Proginator and Myleoid Proginators.</p> <p>b. Also Describe PALS? In which lymphoid organ you will observe this structure. Also mentioned significance in adaptive immunity [2]</p>	CO-2	4+2
Q3	<p>Innate immunity can be seen to comprise four types of defensive barriers: anatomic, physiologic, phagocytic, and inflammatory briefly explain any three barrier and their importance in native immunity.</p>	CO-1	3

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