

# Bankura Christian College

## Department of Physiology

3<sup>rd</sup> YEAR: SEMESTER-V (Academic Session: 2023-24)

Course Code: SP/PHY/501/DSE-1A

Course ID: 52518

Credit- 04; Full Marks: 35

Classes: 11(Lecture) +01(Class test/Revision)

Course Title: Clinical Microbiology and Immunology, Dr Rajkumar Maiti

### Course Learning Outcomes:

1. Students will improve their knowledge about innate, acquired immunity and cell mediated and humoral immunity.
2. Learner will get information on universal protocol of immunization against communicable diseases

### Topics allotted

1. Idea about innate and acquired immunity. Immuno-competent cells.
2. Humoral and cellular immunity. Antigen-antibody interaction.
3. Immunoglobulin – Classification, basic structure and function.
4. Antigen presentation. Major Histocompatibility Complex (MHC)
5. Cytokines and Lymphokines
6. Vaccination – Principles and importance of immunization.
7. Immunization programme – Immunization against Polio, Hepatitis –B, Tetanus, Measles, Whooping cough, Tuberculosis.
8. AIDS- Causative virus, mode of transmission, effects on human body, preventive Measures, principles of diagnostic test for AIDS (ELISA).
9. Immunopathology – Basic principles of autoimmune disease.

MONTH/YEAR	WEEK	PORTIONS
August 2023	5	Basic ideas on Idea about innate and acquired immunity
MONTH/YEAR	WEEK	PORTIONS
September 2023	1	Immuno-competent cells.
	2	Mechanism of humoral immunity(Class-1)
	3	Cell mediated immunity
	4	Antigen-antibody interaction.
MONTH/YEAR	WEEK	PORTIONS
October 2023	1	Immunoglobulin – Classification, basic structure and function.
	2	Antigen presentation. Major Histocompatibility Complex. Cytokines and Lymphokines
MONTH/YEAR	WEEK	PORTIONS
November 2023	1	Vaccination – Principles and importance of immunization
	2	Immunization programme – Immunization against Polio, Hepatitis –B, Tetanus, Measles, Whooping cough, Tuberculosis
	3	AIDS- Causative virus, mode of transmission, effects on human body, preventive measures.
	4	Immunopathology – Basic principles of autoimmune disease.
MONTH/YEAR	WEEK	PORTIONS
December 2023	1	<b>Class test on Clinical Microbiology and Immunology</b>

**Suggested Books:** 1. Punt J. Stranford S. Jones P. Owen J.A.(2018) Kuby Immunology. Eight Edition. WH Freeman Publisher.

2. Mahapatra, A.B.S.M. (2014). Essentials of Medical Physiology. Fourth Edition. Current Books International.

3. Sembulingam K. and Sembulingam, P. (2016). Essentials of Medical Physiology 7<sup>th</sup> Edition. Jaypee.

4. Sharma P. and Kumar P. (2021) Basis of Immunology. 1<sup>st</sup> Edition. IP Innovative Publication Pvt. Ltd.

Rajkumar Maiti