

ST.JOSEPH'S COLLEGE FOR WOMEN(A) ,VISAKHAPATNAM.

ZOOLOGY SYLLABUS FOR VI SEMESTER

ZOOLOGY –ELECTIVE PAPER:VII-(A)

IMMUNOLOGY & CLINICAL APPLICATIONS

OBJECTIVES :

- 1.To learn basic concepts of immunology.
2. To understand the immune system.
3. To inculcate the importance of vaccines.
4. To recognize the various types of hypersensitivities.
- 5.To understand the role of immunity in various diseases.

Max. Marks:100

Unit - I

Overview of Immune system

- .1. Introduction to basic concepts in Immunology
- .2. Innate and adaptive immunity

Cells and organs of Immune system

- 1.Organs of immune system
- 2.Cells of immune system

Unit - II

Antigens

1. Basic properties of antigens
2. B and T cell epitopes, haptens and adjuvants
- 3 .Factors influencing immunogenicity

Antibodies

1. Structure of antibodies.
2. Classes and functions of antibodies
- 3.Monoclonal antibodies.

UNIT-III

Working of Immune system

- 1.Humoral immune response(antibody/ B-cell mediated)
- 2.Primary and Secondary responses.
3. Antigen presentation & processing.
4. Cellular immune response (T-Cell mediated)

5. Basic properties and functions of cytokines.

Unit -I V

Immune Response in health and disease

1. Classification and brief description of various types of hyper sensitivities
2. Introduction to concepts of autoimmunity and immunodeficiency..

Vaccines

1. General introduction to vaccines
- 2 .Types of vaccines.

UNIT-V

CLINICAL APPLICATIONS:

- 1.Immunological Techniques(diagnostic tests):Agglutination,Precipitation, immunoelectrophoresis ,complement fixation,Neutralisation,ELISA,RIA-(radio immunoassay) and HLA typing(human leucocyte antigen system).
- 2 . Auto immune Diseases &Immuno deficiency Diseases.
- 3 .Immunology of organ transplantation.

TEXT BOOKS:

- 1.Text book of Microbiology by K.Ananthanarayanan&C.K.JayaramPaniker.
- 2.Essentials of Medical Microbiology by Rajesh Bhatia & Rattan LalIchhpujani
3. Review of Medical Microbiology by Ernest Jawetz bld.

