

18BP006 REMEDIAL BIOLOGY

Hours Per Week :

L	T	P	CP	CL
2	-	2	1	2

Total Hours :

L	T	P	WA/RA	SSH/HS	CS	SA	S	BS
30	-	30						

SCOPE:

To learn and understand the components of living world, structure and functional system of plant and animal kingdom

COURSE OUTCOMES:

Upon completion of the course, the student will be able to achieve the following outcomes:

COs	Course Outcomes	POs	PSOs
1	Introduce biology to non biology students	1	1
2	know the classification and salient features of five kingdoms of life	1	1
3	understand the basic components of anatomy & physiology of plant	1	1
4	know understand the basic components of anatomy & physiology animal with special reference to human	1,5	1
5	Perform various biology experiments	1,2	1

UNIT-I **07 Hours****LIVING WORLD:**

Definition and characters of living organisms. Diversity in the living world. Binomial nomenclature.

Five kingdoms of life and basis of classification. Salient features of Monera, Protocista, Fungi, Animalia and Plantae.

MORPHOLOGY OF FLOWERING PLANTS: Morphology of different parts of flowering plants – Root, stem, inflorescence, flower, leaf, fruit, seed. General Anatomy of Root, stem, leaf of monocotyledons & Dicotyledones.

UNIT-II **07 Hours****Plants and mineral nutrition:**

Essential mineral, macro and micronutrients. Nitrogen metabolism, Nitrogen cycle, biological nitrogen fixation.

Photosynthesis

Autotrophic nutrition, photosynthesis, Photosynthetic pigments, Factors affecting photosynthesis.

UNIT-III **04 Hours**

Plant respiration: Respiration, glycolysis, fermentation (anaerobic).

Plant growth and development

Phases and rate of plant growth, Condition of growth, Introduction to plant growth regulators

Cell - The unit of life

Structure and functions of cell and cell organelles. Classification of tissues

UNIT-IV **07 Hours****Body fluids and circulation**

Composition of blood, blood groups, coagulation of blood. Composition and functions of lymph. Human circulatory system - Structure of heart and blood vessels.

Digestion and Absorption

Human alimentary canal - Basic Structure and Functions.

Breathing and respiration

Human respiratory system - Basic Structure and Functions.

UNIT-V **07 Hours****Excretory products and their elimination**

Modes of excretion. Human excretory system- Basic Structure and Functions.

Neural control and coordination

Definition and classification of nervous system, Structure of neuron.

Chemical coordination and regulation

Endocrine glands and their secretions. Functions of hormones secreted by endocrine glands.

Human reproduction

Parts of female reproductivesystem. Parts of male reproductivesystem.

TEXT BOOKS:

- a. Text book of Biology by S. B.Gokhale
- b. A Text book of Biology by Dr. Thulajappa and Dr.Seetaram.

REFERENCE BOOKS:

- A. A Text book of Biology by B.V. Sreenivasa Naidu
- B. A Text book of Biology by Naidu and Murthy
- C. Botany for Degree students By A.C.Dutta.
- D. Outlines of Zoology by M. Ekambaranatha ayyer and T. N. Ananthkrishnan.
- E. A manual for pharmaceutical biology practical by S.B. Go hale and C. K. Kolkata

