

Subject Code: BP106RBT	Subject Title: Remedial Biology - Theory
Pre-requisite Subject	- NONE -

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

Objectives:

Upon completion of the course, the student shall be able to

- know the classification and salient features of five kingdoms of life
- understand the basic components of anatomy & physiology of plant
- know understand the basic components of anatomy & physiology animal with special reference to human

Teaching Scheme (Hours per week)				Evaluation Scheme (Marks)		
Lecture	Tutorial	Practical	Credit	Theory(T)		Total Marks
				University Assessment	Continuous Assessment	
						Theory
2	---	--	2	NA	50*	50

*means Non University Examination (NUE). The subject expert at college level shall conduct examinations.

Subject Contents			
Sr. No.	Topic	Total Hours (30 hours)	Weight (%)
1	UNIT I 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, Potista, Fungi, Animalia and Plantae, Virus, 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 & Dicotylidones.	07	23
2	UNIT II Body fluids and circulation • Composition of blood, blood groups, coagulation of blood • Composition and functions of lymph • Human circulatory system • Structure of human heart and blood vessels • Cardiac cycle, cardiac output and ECG Digestion and Absorption • Human alimentary canal and digestive glands • Role of digestive enzymes	07	23

	- Digestion, absorption and assimilation of digested food Breathing and respiration - Human respiratory system - Mechanism of breathing and its regulation - Exchange of gases, transport of gases and regulation of respiration - Respiratory volumes		
3	UNIT III Excretory products and their elimination - Modes of excretion - Human excretory system- structure and function - Urine formation - Rennin angiotensin system Neural control and coordination - Definition and classification of nervous system - Structure of a neuron - Generation and conduction of nerve impulse - Structure of brain and spinal cord - Functions of cerebrum, cerebellum, hypothalamus and medulla oblongata Chemical coordination and regulation - Endocrine glands and their secretions - Functions of hormones secreted by endocrine glands Human reproduction - Parts of female reproductive system - Parts of male reproductive system - Spermatogenesis and Oogenesis - Menstrual cycle	07	23
4	UNIT IV 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.	05	17
5	UNIT V 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. Cell division Tissues - Definition, types of tissues, location and functions.	04	14

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) d.Outlines of Zoology byM. Ekambaranatha ayyer and T. N. Ananthakrishnan.
- e) A manual for pharmaceutical biology practical by S.B. Gokhale and C. K. Kokate