



Gyanmanjari
Innovative University

Course Syllabus
Gyanmanjari Pharmacy College
Semester-1(B.Pharm.)

Subject: Remedial Biology (BPHBP11202)

Type of course: VAC (Value Added Course)

Prerequisite:

Rationale

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

Teaching Scheme			Credits	Examination Marks		Total Marks
CI	T	P		C	Theory Marks	
			ESE		MSE	
2	-	-	2	35	15	50

Legends: *L-Lecture; T – Tutorial/Teacher Guided Theory Practice; P - Practical; C – Credit, CA - Continuous Assessment; ESE - End Semester Examination.*

Course Contents

Sr No	Course Contents	Total Hrs	% Weight age
1	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, Protista, 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 & Dicotyledonous	7	23



2	<p>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</p> <p>Digestion and Absorption Human alimentary canal and digestive glands, Role of digestive enzymes, 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</p>	7	23
3	<p>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.</p> <p>Human reproduction Parts of female reproductive system Parts of male reproductive system, Spermatogenesis and Oogenesis Menstrual cycle.</p>	7	23
4	<p>Plants and mineral nutrition: Essential mineral, macro and micronutrients, Nitrogen metabolism, Nitrogen cycle, biological nitrogen fixation</p> <p>Photosynthesis Autotrophic nutrition, photosynthesis, Photosynthetic pigments, Factors, Affecting photosynthesis.</p>	5	17
5	<p>Tissues Definition, types of tissues, location and functions.</p>	4	14

Suggested Specification table with Marks (Theory):35

Distribution of Theory Marks (Revised Bloom's Taxonomy)						
Level	Remembrance (R)	Understanding (U)	Application (A)	Analyze (N)	Evaluate (E)	Create (C)
Weightage	30%	40%	20%	05%	05%	

Note: This specification table shall be treated as a general guideline for students and teachers. The actual distribution of marks in the question paper may vary slightly from above table.

Course Outcomes

After successful completion of the course student shall be able to	
CO1:	Discuss characters of living organisms, Diversity in the living world, Binomial nomenclature, Five kingdoms of life and basis of classification. Salient features of Monera, Protista, Fungi, Animalia and Plantae, Virus.
CO2:	Explain 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, Breathing and respiration.
CO3:	Explain excretory products and their elimination, Neural control and coordination, Chemical coordination and regulation, Endocrine glands and their secretions, Human reproduction.
CO4:	Discuss about 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.

Text Books

1. Text book of Biology by S. B. Gokhale
2. A Text book of Biology by Dr. Thulajappa and Dr. Seetaram.
3. A Text book of Biology by Naidu and Murthy
4. Botany for Degree students By A.C.Dutta.
5. Outlines of Zoology by M. Ekambaranatha ayyer and T. N. Ananthkrishnan.

Reference Books

1. Practical human anatomy and physiology. by S.R.Kale and R.R.Kale.
2. A Manual of pharmaceutical biology practical by S.B.Gokhale, C.K.Kokate and S.P.Shriwastava.
Biology practical manual according to National core curriculum .Biology forum of Karnataka. Prof .M.J.H.Shafi.

