



Program	Bachelor of Pharmacy (BPharm)	Semester - 1
Type of Course	-	
Prerequisite		
Course Objective	-	
Effective From A.Y.	2023-24	

Teaching Scheme (Contact Hours)				Examination Scheme				
Lecture	Tutorial	Lab	Credit	Theory Marks		Practical Marks		Total Marks
				External Marks (T)	Internal Marks (T)	External Marks (P)	Internal Marks (P)	
2	-	2	3	35	15	15	10	75

SEE - Semester End Examination, CIA - Continuous Internal Assessment (It consists of Assignments/Seminars/Presentations/MCQ Tests, etc.)

Course Content		T - Teaching Hours W - Weightage	
Sr.	Topics	T	W
1	UNIT 1 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, Potista, Fungi, Animalia and Plantae, Virus, 2. 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.	7	23
2	UNIT 2 1. 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 2. Digestion and Absorption Human alimentary canal and digestive glands Role of digestive enzymes Digestion, absorption and assimilation of digested food 3. Breathing and respiration Human respiratory system Mechanism of breathing and its regulation Exchange of gases, transport of gases and regulation of respiration Respiratory volumes	7	23
3	UNIT 3	7	23



Course Content		T - Teaching Hours W - Weightage	
Sr.	Topics	T	W
	1. Excretory products and their elimination Modes of excretion Human excretory system- structure and function, Urine formation, Rennin angiotensin system 2. 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 3. Chemical coordination and regulation Endocrine glands and their secretions Functions of hormones secreted by endocrine glands 4. Human reproduction Parts of female reproductive system Parts of male reproductive system Spermatogenesis and Oogenesis Menstrual cycle		
4	UNIT 4	5	17
	1. Plants and mineral nutrition: Essential mineral, macro and micronutrients Nitrogen metabolism, Nitrogen cycle, biological nitrogen fixation 2. Photosynthesis Autotrophic nutrition, photosynthesis, Photosynthetic pigments, Factors affecting, photosynthesis.		
5	Unit 5	4	14
	1. Plant respiration: Respiration, glycolysis, fermentation (anaerobic). 2. Plant growth and development Phases and rate of plant growth, Condition of growth, Introduction to plant growth regulators 3. Cell - The unit of life Structure and functions of cell and cell organelles. Cell division 4. Tissues Definition, types of tissues, location and functions		
Total		30	100

Suggested Distribution Of Theory Marks Using Bloom's Taxonomy

Level	Remembrance	Understanding	Application
Weightage	25	50	25

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

Course Outcomes

At the end of this course, students will be able to:

C01	Knowledge and basic understanding of living world, its classification and plant anatomy.
C02	Basic knowledge of plant nutrition, photosynthesis, plant respiration, growth, cell and tissue
C03	Basic knowledge of anatomy and physiological process of human body: Circulatory, Digestive, Respiratory, Reproductive, Excretory, Nervous system
C04	Ability to perform microscopical study and identification of plant parts; identify bones, measure BP and tidal volume



Reference Books

1.	Human Anatomy and Physiology (TextBook) By Dr. R.K.Goyal B.S.Shah Prakashan 7, Pub. Year 2016
2.	Biogas Technology - A Practical Hand Book (TextBook) By Khandelwal, K. C. and Mahdi, S. S. Tata McGraw Hill
3.	Remedial Biology (TextBook) By S S Randhava, Atul kabra Pee vee 1, Pub. Year 2017
4.	Remedial Biology (TextBook) By Dr Monika Sachdeve, Prof. Rajesh Dholpuria Nirali 2, Pub. Year 2018
5.	Remedial Biology (TextBook) By Dr. Vaishali R Undale, Mukta M Abhyankar Tach. Max 1, Pub. Year 2017
6.	Tax book of Biology By S B Gokhale
7.	A tax book of Biology By Dr. Thulajappa, Dr, Seetaram

List of Practical

1.	To study the compound microscope.
2.	To understand section cutting techniques of section cutting, mounting and staining.
3.	Study of plant cell and its inclusions with the help of chart and slides.
4.	To study the general morphology of root and it's modifications.
5.	To study the general morphology of stem and it's modifications.
6.	To study the general morphology of leaf and it's modifications.
7.	To study the general morphology of flower and it's modifications.
8.	To study the general morphology of fruits and it's modifications.
9.	To determine the blood group of your own blood.
10.	To determine the blood pressure using sphygmomanometer.
11.	To prepare temporary stained mount section of vidhania roots and study tissue.
12.	To prepare temporary stained mount section of ephedra stem and study tissue
13.	To prepare temporary stained mount section of leaf and study tissue.
14.	Determination of tidal volume
15.	Identification of bones.