



(Master of Science-Home Science) (Food Biotechnology)
(M.Sc.-H.Sc.) (Food Biotechnology) Semester (I)

Course Code	PH01EFBT53	Title of the Course	Physiology and Clinical Biochemistry
Total Credits of the Course	04	Hours per Week	04

Course Objectives:	<ol style="list-style-type: none">1. To understand the physiology of human body2. To comprehend the structure of the human body3. To gain knowledge about the disorders of various system and diagnostic tools for the same
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Course Content		
Unit	Description	Weightage (%)
1.	(a) Blood: Composition, properties, functions, blood group (b) RBC: Genesis, factors affecting its Genesis (c) Haemoglobin: Synthesis and types (d) WBC: Genesis, body's resistance to infections, inflammation, phagocytosis, antibodies, immunity (e) Platelets: Blood clotting mechanism (f) Disorders of the above blood components and their diagnostic tools	25
2.	(a) Digestive system: Organs, composition and functions of digestive juices, process of digestion (b) Absorption: Organs and process of absorption (c) Disorders of the digestive system and their diagnostic tools	15
3.	(a) The Heart: Anatomy, working, control of heart rate, electrocardiogram (b) Circulation: Blood flow, blood pressure and factors maintaining it, blood vessels and tissue fluids (c) Disorders of the cardiovascular system and their diagnostic tools	20
4.	(a) Respiration: Physiology of respiration, transport and exchange of gases, regulation of respiration-chemical and nervous mechanisms and effect of altitude on respiration (b) Pregnancy and lactation: The mammary glands, lactation and menopause (c) Disorders of the respiratory system and their diagnostic tools	20
5.	(a) Excretion: Organs, regulation, composition of urine, diluting and concentrating mechanism of urine by the kidney (b) Disorders of the excretory system and their diagnostic tools	20





Teaching-Learning Methodology	Classroom lectures (Blackboard/Power Point Presentations), Discussion on recent updates with related examples
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Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weightage
1.	Internal Written Examination (As per CBCS R.6.8.3)	15%
2.	Internal Continuous Assessment in the form of Quizzes, Seminars, Assignments, Attendance (As per CBCS R.6.8.3)	15%
3.	University Examination	70%

Course Outcomes: Having completed this course, the learner will be able to	
1.	Describe about the genesis and functions of major constituents of blood.
2.	Discuss about the functioning of different systems of the human body, their disorders and diagnostic tools for the same.

Suggested References:	
Sr. No.	References
1.	Sembulingam, K. (2019). <i>Essentials of Medical Physiology</i> (8th Revised edition). Jaypee Brothers Medical Publishers.
2.	Hall, J. E. (2005). <i>Guyton and Hall Physiology Review</i> . Saunders.
3.	Chatterjee, C. C. (2016). <i>Human Physiology Revised Enlarged Reprint: Vol. Vol.1</i> (11th ed.). Cbs.
4.	Chatterjee, C. C. (2018). <i>Human Physiology: Vol. Vol. 2</i> (12th ed.). Cbs

On-line resources to be used if available as reference material
On-line Resources





www.annualreviews.org/journal/Physiology

