

SARDAR PATEL UNIVERSITY
Programme: MSC (Integrated Biotechnology)
Semester: VI
Syllabus with effect from: December 2012

Paper Code: PS06CIGB06	Total Credits: 3
Title Of Paper: Animal Physiology	

Unit	Description in detail	Weightage (%)
1	Introduction and scope of physiology: Digestive System: Composition, functions and regulation of saliva, gastric, pancreatic intestinal and bile secretions – digestion and absorption of carbohydrates, lipids, proteins nucleic acids, minerals and vitamins.	
2	Cardiovascular system: Structure and function of Heart structure and composition of blood, general functions of blood, mechanism of blood clotting, anticoagulants	
3	Nervous system: Types of Nervous system, structure and functions of neurons, types of neurons, synapse, conduction of nerve impulse in nerve fiber, structural and functions of brain parts in brief.	
4	Urinary system: anatomy and histology of kidneys, the nephron, renal physiology-glomerular filtration and tubular reabsorption and tubular secretion. Endocrine system: Hormones- location, structure, secretions and effects of hormones (in brief), feedback mechanism- positive and negative.	
	Practical:	
	<ul style="list-style-type: none"> • Determination of Bleeding time • Determination of Clotting time • Preparation of haemin crystals • Test for salivary amylase • Determination of hemoglobin by hemoglobinometer • Determination of RBCs by hemocytometer • Determination of WBCs by hemocytometer • Osmotic fragility test • Blood grouping • Qualitative analysis of urine sample 	

Basic Text & Reference Books:

- Animal physiology by Verma, Tyagi and Aggarwal, Pub. S. Chand & Company Ltd. New Delhi. ISBN-81-219-0351-3.
- A textbook of Animal physiology by A. K. Berry, Emkay Publications, Delhi. ISBN-81-85712-03-4.
- Animal physiology by Mohan P. Arora, Himalaya publishing House. ISBN-81-7866-723-1.
- Animal physiology by Goyal and Shastry, Rastogi Publications. ISBN-81-7133-864-X.
- Animal physiology by R. C. Sobti, Narosa Publishing House, New Delhi. ISBN-978-81-7319-193-0.
- Principles of anatomy and physiology by Tortora G., John Wiley & Sons Inc. U.S.A. ISBN-0-471-22472-3.
- Biological science by Taylor, Cambridge University Press. UK. ISBN-0-521-68417-X.

