

GEMS ARTS AND SCIENCE COLLEGE, RAMAPURAM
POST GRADUATE DEPARTMENT OF MICROBIOLOGY

BIOCHEMISTRY (COMPLEMENTARY- COURSE OUTCOMES)

COURSE OUTCOMES (COs)

SEMESTER I

COURSE CODE	PAPER NAME	CREDITS	COURSE OUTCOME
BCH1C01	BIOCHEMISTRY I		CO1- Recognize Biochemistry as a discipline and understand the basic concepts of biochemical evolution
			CO2- Understand the isomerism of carbohydrates and conceptualize monosaccharides, disaccharides and polysaccharides
			CO3- Illustrate the features of amino acids and proteins and analyze structural levels of organizations of proteins and their reactions
			CO4- Explain the structure of RNA and DNA
			CO5- Describe the structure, properties, major classes and roles of lipids.

COURSE CODE	PAPER NAME	CREDITS	COURSE OUTCOME
BCH1C05	BIOCHEMISTRY PRACTICAL I		CO1- Identify laboratory requirements, instruments and their uses.
			CO2- Perform colorimetric analysis and verify the principles involved
			CO3- Analyze biochemical samples qualitatively.
			CO4- Identify various biomolecules in the samples using standard protocols.

SEMESTER II

COURSE CODE	PAPER NAME	CREDITS	COURSE OUTCOME

BCH2C02	BIOCHEMISTRY II		CO1- Identify the types of molecular interactions, concepts on acids, bases and solutions, and the physical aspects of Biochemistry.
			CO2- Describe the transport of molecules across the cell.
			CO3- Explain plasma proteins, coagulation of blood and maintenance of pH of the blood
			CO4- Outline the principles and applications of chromatography techniques.
			CO5- Comprehend different types of electrophoretic techniques.
			CO6- Define absorption photometry and explain its application

COURSE CODE	PAPER NAME	CREDITS	COURSE OUTCOME
BCH1C05	BIOCHEMISTRY PRACTICAL II		CO1- Understand the preparation of solutions.
			CO2- Perform colorimetric analysis and verify the principles involved
			CO3- Develop basic practical skills in quantitative estimation of biomolecules and their separation techniques

SEMESTER III

COURSE CODE	PAPER NAME	CREDITS	COURSE OUTCOME
BCH3C03	BIOCHEMISTRY III		CO1- Learn the basics of enzymology along with conceptualizing K_m and LB Plot and illustrating the types of enzyme inhibition
			CO2- Familiarize the process of ATP formation and review glycolysis, glycogen metabolism, gluconeogenesis and HMP pathway.
			CO3- Understand the mechanisms of TCA cycle and the mechanism of oxidative phosphorylation
			CO4- Outline photophosphorylation and analyse calvin cycle and glyoxylate cycle

COURSE CODE	PAPER NAME	CREDITS	COURSE OUTCOME
BCH1C05	BIOCHEMISTRY PRACTICAL III		CO1- Perform colorimetric assays
			CO2- Estimate biomolecules quantitatively and illustrate their clinical implications.

SEMESTER IV

COURSE CODE	PAPER NAME	CREDITS	COURSE OUTCOME
BCH3C03	BIOCHEMISTRY III		CO1- Explain β -oxidation and conceptualize cytoplasmic systems of fatty acid biosynthesis
			CO2- Analyze decarboxylation, deamination, and transamination of amino acids and illustrate the Metabolism of ammonia.
			CO3- Conceptualize central dogma of molecular biology
			CO4- Outline classification, mechanism of action and physiological function of hormones.

COURSE CODE	PAPER NAME	CREDITS	COURSE OUTCOME
BCH1C05	BIOCHEMISTRY PRACTICAL IV		CO1- Perform colorimetric assays
			CO2- Estimate biomolecules quantitatively and illustrate their clinical implications.