

ACADEMIC ORGANISER (2017-2018)

(BtGC) Semester I Paper I

Cell Biology and Genetics (BT 133)

Month And Number Of Teaching Days	Syllabus Proposed To Be Covered Month Wise	Remarks
June (4) Classes allotted 2	UNIT-I: Cell Structure and Function upto Viruses	
July (23) Classes allotted 19	UNIT-I: Cell structure and Function upto mitochondria and chloroplast UNIT II: Chromosome organization and cell division upto lamp brush chromosome	
August (20) Classes allotted 16+1	UNIT-II: Chromosome organization and cell division upto apoptosis UNIT III: Mendel's Laws and mechanism of Inheritance upto Law of independent assortment	
September (26) Classes allotted 15	UNIT III: Mendel's Laws and mechanism of Inheritance upto cleft lips and palate UNIT IV: Linkage, Recombination and Sex determination upto Meiotic crossing over	
October (3) Classes allotted 2	UNIT IV: Linkage , recombination and Sex determination upto X – linked inheritance	

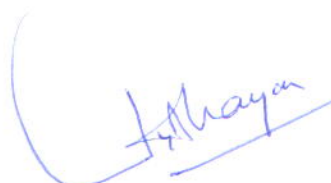


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(BtGC) Semester II Paper II

Nucleic Acids, Biostatistics and Bioinformatics (BT 233)

Month And Number Of Teaching Days	Syllabus Proposed To Be Covered Month Wise	Remarks
November (18) Classes allotted 15	UNIT-I: Structure, function of Nucleic acids upto tRNA molecule UNIT II: DNA replication upto types of replication	
December (16) Classes allotted 14	UNIT II: DNA replication upto enzymes involved in DNA replication Unit IV: Bioinformatics upto biological databases	
January (17) Classes allotted 17	UNIT-III: Biostatistics upto concept of probability UNIT IV: Biostatistics upto pair wise & multiple alignment	
February (18) Classes allotted 15+3	UNIT-III: Biostatistics upto Statistics application in biology	



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(BtGC) Semester III Paper III

Biochemistry (BT333)

Month And Number Of Teaching Days	Syllabus Proposed To Be Covered Month Wise	Remarks
June (14) Classes allotted 8	UNIT-I: Carbohydrates and proteins upto peptidoglycan	
July (23) Classes allotted 19+1	UNIT-I: Carbohydrates and proteins upto Ramachandran plot UNIT-II: Lipids, enzymes, vitamins and minerals upto enzyme inhibition UNIT III: Intermediary metabolism of carbohydrates and lipids upto Glycolysis	
August (20) Classes allotted 16	UNIT III: Intermediary metabolism of carbohydrates and lipids UNIT IV: Intermediary metabolism of proteins and photosynthesis upto photosynthesis	
September (16) Classes allotted 13	UNIT IV: Intermediary metabolism of proteins and photosynthesis upto Chemiosmotic theory of ATP synthesis	
October (4) Classes allotted 2	UNIT IV: Intermediary metabolism of proteins and photosynthesis upto carbon assimilation	



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(BtGC) Semester IV Paper IV

Microbiology and Biophysical Techniques (BT 433)

Month And Number Of Teaching Days	Syllabus Proposed To Be Covered Month Wise	Remarks
November (18) Classes allotted 15+2	UNIT-I: Identification of microorganism and sterilization methods upto pure cultures, cultural characteristics	
December (16) Classes allotted 13	UNIT II: Bacterial reproduction and disease causing micro organisms upto typhoid	
January (17) Classes allotted 15+1	UNIT-II: Bacterial reproduction and disease causing micro organisms upto HIV UNIT III: Photometry and microscopy upto NMR, electron microscopy	
February (15) Classes allotted 15+1	UNIT-III: Photometry and microscopy upto Phase contrast microscopy UNIT-IV: Biophysical techniques upto autoradiography	



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(BtGC) Semester V Paper V

Molecular Biology (BT 533)

Month and Number of teaching days	Syllabus proposed to be covered month wise	Remarks
June (14) Classes allotted 4	UNIT I: Genes and Gene kinetics Organization of nuclear genome upto Denaturation and Renaturation of DNA	
July (23) Classes allotted 11+2	UNIT I: Genes and genome organization upto Satellite DNA UNIT II: Genome Organization- upto mutagens	
August (20) Classes allotted 10	UNIT II: Genome Organization- upto DNA repair mechanisms UNIT III: Gene expression upto eukaryotic transcription	
September (6) Classes allotted 4	UNIT III: Gene expression upto eukaryotic translation UNIT IV: Gene regulation upto Operon concept in bacteria – Lac operon	
October (3) Classes allotted 3	UNIT IV: Gene regulation upto Gal locus in Yeast	



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(BtGC) Semester V Paper VA

Animal and Plant Biotechnology (BT 533A)

Month and Number of teaching days	Syllabus proposed to be covered month wise	Remarks
June (14) Classes allotted 10	UNIT I: Animal Biotechnology- Principles of animal cell culture upto cell lines	
July (23) Classes allotted 12+1	UNIT I: Animal Biotechnology- Principles of animal cell culture upto enzymatic disaggregation UNIT II: Applications of animal cell cultures upto <i>in vivo</i> gene therapy	
August (20) Classes allotted 13	UNIT III: Plant Biotechnology- Principles of plant cell culture upto organogenesis UNIT IV: Applications of plant cell culture upto batch culture	
September (16) Classes allotted 8+2	UNIT IV: Applications of plant cell culture upto transgenic plants	

*Jyothya*



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**(BtGC) Semester VI Paper VI**

**Genetic Engineering and Immunology (BT 633)**

Month and Number of teaching days	Syllabus proposed to be covered month wise	Remarks
November (18) Classes allotted 10+2	UNIT I: Recombinant DNA technology upto Baculovirus UNIT II: Recombinant DNA technology upto Construction of genomic and cDNA libraries	
December (16) Classes allotted 8	UNIT II: Analysis of cloned DNA- upto blotting techniques	
January (17) classes allotted 9+4	UNIT II: Analysis of cloned DNA- upto DNA fingerprinting UNIT III: Basics of immunology upto primary antibody response	
February (18) 11	UNIT III: Basics of immunology upto secondary antibody responses UNIT IV: Antigen antibody reactions upto Autoimmune diseases	



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(BtGC) Semester VI Paper VIA

Industrial and Environmental Biotechnology (BT 633A)

Month and Number of teaching days	Syllabus proposed to be covered month wise	Remarks
November (18) Classes allotted 10+2	UNIT I: Industrial Biotechnology – Bioreactors upto Bioprocess technology UNIT II: Fermentation Technology upto Fermentative production of microbial enzymes	
December (16) Classes allotted 8	UNIT II: Fermentation Technology upto Intellectual Property Rights and Patenting issues. UNIT III: Environmental Biotechnology- Biofuels and Biodiversity upto Non-renewable energy resources	
January (17) classes allotted 14	UNIT III: Environmental Biotechnology- Biofuels and Biodiversity upto Preservation of endangered species UNIT IV: Environmental Biotechnology – Microbial Degradation upto Microbiological treatment of municipal and industrial effluents	
February (18) 9+4	UNIT IV: Environmental Biotechnology – Microbial Degradation upto Concepts of Bioremediation- In- situ, Ex-situ, Phyto-remediation	

