

**ACADEMIC ORGANISER (2015-2016)****Genetics Paper I****Semester - I**

<b>Month And Number Of Teaching Days</b>	<b>Syllabus Proposed To Be Covered Month Wise</b>	<b>Remarks</b>
<b>July(25) Classes allotted - 14</b>	<b>UNIT-I: Mendelian Inheritance- Law of Independent Assortment. (6 classes)</b>  <b>UNIT-II: Cell Division and Chromosome segregation- Mitosis-significance.(8 classes)</b>	
<b>August(20) Classes allotted 16</b>	<b>UNIT-I: Mendelian Inheritance. (7 classes + 2 extra)</b> <b>UNIT-II: Cell Division and Chromosome segregation-gametogenesis.(7 classes)</b> <b>UNIT-IV: Linkage, Recombination and mapping of genes in Eukaryotes – Phases of Linkage. (2 classes)</b>	
<b>September (18) Classes allotted 12</b>	<b>UNIT-III: Extensions to Mendelian Inheritance patterns- lethal and sub-lethal genes. (4 classes + 3 extra)</b> <b>UNIT-IV: Linkage, Recombination and mapping of genes in Eukaryotes – 3 point test crosses. (8classes)</b>	
<b>October(17) Classes allotted 14</b>	<b>UNIT-III: Extensions to Mendelian Inheritance patterns- multiple alleles. (6 classes)</b>  <b>UNIT-IV: Linkage, Recombination and mapping of genes in Eukaryotes – mitotic recombination. (8 classes)</b>	
<b>November(5) Classes allotted 2</b>	<b>UNIT-III: Extensions to Mendelian Inheritance patterns- self incompatibility. (2 classes)</b>	




Head of The Department  
Dept. of Botany, Genetics & Biotechnology  
BVC, Solihpur

**ACADEMIC ORGANISER (2015-2016)**

**Genetics Paper II**


**Semester - II**

Month And Number Of Teaching Days	Syllabus Proposed To Be Covered Month Wise	Remarks
November(1) Classes allotted - 1	UNIT-II: Chromosome structure, chromatin organization and variation- Morphology.(1 class)	
December(21) Classes allotted 16	UNIT-I: Polygenes and Multi-factorial Inheritance- environment effects on twins. (7 classes + 2 extra) UNIT-II: Chromosome structure, chromatin organization and variation- Deletions (9 classes)	
January (19) Classes allotted 15	UNIT-I: Polygenes and Multi-factorial Inheritance- Diabetes Mellitus. (6classes) UNIT-II: Chromosome structure, chromatin organization and variation- Numerical aberrations (5 classes + 2 extra) UNIT-IV: Recombination and mapping of genes in Bacteria and Viruses- Transformation (2 classes)	
February(24) Classes allotted 20	UNIT-III: Genetics of sex-determination and sex-linked inheritance- Sex-linked inheritance. (9 classes)  UNIT-IV: Recombination and mapping of genes in Bacteria and Viruses- Chloroplast and Mitochondrial Inheritance(11 classes)	
March(18) Classes allotted 12	UNIT-III: Genetics of sex-determination and sex-linked inheritance- Sex-influenced characters. (6 classes) UNIT-IV: Recombination and mapping of genes in Bacteria and Viruses- Extra chromosomal Inheritance (2 classes+ 4 extra)	

  
 Head of The Department  
 Dept. of Botany, Genetics and Biotechnology  
 BVC, Bellary


**ACADEMIC ORGANISER (2015-2016)**  
**Genetics Paper II** (Annual)

Month And Number Of Teaching Days	Syllabus Proposed To Be Covered Month Wise	Remarks
June(19) Classes allotted 14	UNIT-I: Nucleic Acids- up to –DNA as genetic material- expt.(10classes) UNIT-III: Fine structure of the Gene- one gene one enzyme hypothesis. (4 classes)	
July(25) Classes allotted 18	UNIT-I: Nucleic Acids- DNA replication – enzymes involved.(10 classes) UNIT-III: Fine structure of the Gene- intra-codon recombination. (8 classes)	
August(19) Classes allotted 14	UNIT-II: Genome Organization- re association kinetics. (8 classes) UNIT –IV: Gene Expression in Prokaryotes & Eukaryotes– reverse transcription.(6 classes)	
September(18) Classes allotted 12	UNIT-II: Genome Organization- Histone genes.(8 classes) UNIT –IV: Gene Expression in Prokaryotes & Eukaryotes– to complete.(4 classes)	
October (15) Classes allotted 10	UNIT-II: Genome Organization- Evolutionary significance.(7 classes) UNIT-V: Regulation of Gene Expression- lac operon. (3classes)	
November(23) Classes allotted 19	UNIT-V: Regulation of Gene Expression- pattern formation in <i>Drosophila</i> . (8 classes + 2 extra) UNIT-VI: Gene Mutations- Russel’s Test.(11classes)	
December(21) Classes allotted 15	UNIT-VI: Gene Mutations- Repair mechanisms.(6classes) UNIT-VII: Transposable elements up to <i>Drosophila</i> – retro transposons.(3 classes) UNIT –VIII: Recombinant DNA Technology – vectors. (6 classes)	
January(13) Classes allotted 10	UNIT-VII: Transposable elements- bacterial transposons.(6 classes) UNIT –VIII: Recombinant DNA Technology –cloning strategies. (4 classes + 2 extra)	

  
 Head of The Department  
 Dept. of Botany, Genetics & Biotechnology  
 BVC, Sainikpur


**ACADEMIC ORGANISER (2015-2016)**  
**Genetics Paper III** (Annual)

Month And Number Of Teaching Days	Syllabus Proposed To Be Covered Month Wise	Remarks
June(19) 8	UNIT-I: Structure of Populations –applications of HWL.(8 classes)	
July(25) 11	UNIT-I: Structure of Populations (4 classes) UNIT-II: Mutation- reversible mutations.(4 classes) UNIT-III: Selection- against recessives. (3classes)	
August(19) 11	UNIT-III: Selection- against heterozygotes.(11)	
September(18) 8	UNIT-IV: Migration-founder effect(8 classes)	
October(15) 3	-	
November (23) 11	UNIT-V: Inbreeding and its effect- Genetic Load. (11classes+ 1 extra)	
December (21) 11	UNIT VI: Selection and breeding methods in plants .(7 classes) UNIT VII: Selection and breeding methods in animals – cross breeding.(4 classes)	
January(13) 10	UNIT VII: Selection and breeding methods in animals.(3 classes) UNIT-VIII: Genome evolution and Population variation.( 7 classes + 2 extra)	

  
 Head of The Department  
 Dept. of Botany, Genetics & Biotechnology,  
 BVC, Sainikpuri

**ACADEMIC ORGANISER (2015-2016)**  
**Genetics Paper IV** (Annual)

Month And Number Of Teaching Days	Syllabus Proposed To Be Covered Month Wise	Remarks
June(19) 8	UNIT-I:Advanced Techniques in Genome Analysis – PAGE electrophoresis(8 classes)	
July(25) 12	UNIT-I:Advanced Techniques in Genome Analysis – DNA fingerprinting (12 classes + 3 extra)	
August(19) 12	UNIT-II: Strategies of Gene Transfer- Engineered embryonic stem cells.(12 classes)	
September(18) 8	UNIT-III: Genetic Engineering of Plants –stress tolerant plants . (6 classes)	
October(15) 4	UNIT-IV: Genetic Engineering of Animals –nuclear transfer and cloning. (4 classes)	
November(23) 11	UNIT-IV: Genetic Engineering of Animals –transgenic mice as animal models for genetic diseases.(5 classes)  UNIT-V: Management of inherited Human Diseases –pre natal diagnosis .(6 classes)	
December(21) 11	UNIT-V: Management of inherited Human Diseases –gene therapy .(6 classes+ 1 extra) UNIT-VI: Genetic Engineering & Industrial Products – biodegradation of xenobiotics.(5 classes + 2 extra)	
January(13) 11	UNIT-VII: Statistical analysis in Genetics – Correlation and regression of genetic variables (8 classes) UNIT-VIII: Genome projects and their scope–emergence of Bioinformatics.(3 classes+ 1 extra)	

  
 Head of The Department  
 Dept. of Botany, Gen. & Biotechnology  
 BVC, ...