

**SARDAR PATEL UNIVERSITY**  
**Programme: BSC (GENETICS)**  
**Semester: III**  
**Syllabus with effect from: June 2012**

<b>Paper Code:</b> US03CGEN03	<b>Total Credit: 3</b>
<b>Title Of Paper:</b> Genetics Practical	

Unit	Description in detail	Weighting (%)
1	Principles, working and uses of following laboratory instruments: Microscope, Incubator, pH meter, Colorimeter, Centrifuge, Colony counter, Vertex, Water bath	
2	Principles, working and uses of following used for sterilization Hot air oven, Autoclave, Laminar air flow	
3	Principles, working and uses of instruments used in molecular genetics lab UV Spectrophotometer, Agarose gel electrophoresis unit, Thermal cycler Microwave oven, Electrophoresis unit (vertical), UV trans-illuminator Micropipettes and tips, UV chamber, Refrigerator	
4	Study of different kinds of cells from leaf peels, insects, flower stamens, petals, staining with nuclear stain to show cytoplasm & nucleus. Osmosis, plasmolysis & deplasmolysis demonstration with leaf peels in different concentration of glycerine. Study of cell divisions, identification of different stages of mitosis Study of cell divisions, identification of different stages of meiosis Special types of chromosomes Salivary gland chromosome, Supernumerary chromosome Demonstration of Barr bodies Examples on mono-hybrid, di-hybrid, ratio and interaction of genes and linkage Extraction of proteins Estimation of proteins Classification and tabulation of data Practical on Histogram, frequency polygon, frequency curve. Measures of central tendency Measures of dispersion	

**Basic Text & Reference Books: -----**

