

**NEW ERA SENIOR SECONDARY SCHOOL NIZAMPURA, VADODARA**

**Yearly Syllabus planning**

**Class XI Biotechnology**

MONTH	NO. OF DAYS	Chapter	Content
April May	22 3	<b>Biotechnology: An Over view</b>  <b>The Basic Unit of life</b>	<ul style="list-style-type: none"> <li>• Introduction to Biotechnology</li> <li>• Introduction to cell</li> <li>• Cell structure and components</li> <li>• Bacterial cell and characteristics</li> <li>• cell membrane and cytoplasm</li> </ul>
June	18	<b>The Basic Unit of life</b>	<ul style="list-style-type: none"> <li>• Membrane proteins, lipids and cell wall</li> <li>• Cell organelles: Endoplasmic reticulum, Golgi apparatus, Chloroplast, Mitochondria, Vacuoles, and cell inclusions</li> <li>• Nucleus, chromosomes - basic structure, number.</li> <li>• prokaryotic and eukaryotic cells</li> </ul>
July	26	<b>Cell Growth and Development</b>	<ul style="list-style-type: none"> <li>• Cell Division</li> <li>• Mitosis</li> <li>• Meiosis</li> <li>• Cell cycle and Regulation</li> <li>• Cell communication</li> </ul>
August	22	<b>Molecules of Life</b>	<ul style="list-style-type: none"> <li>• Building blocks: Carbohydrates, Amino acids</li> </ul>
Sept.	23	<b>Molecules of Life</b>	<ul style="list-style-type: none"> <li>• Building blocks:, Vitamins and Coenzymes, Lipids and Nucleic acids</li> </ul>

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Oct.	11	<b>Molecules of Life</b>	<ul style="list-style-type: none"> <li>• Enzymes</li> </ul>
Nov.	21	<b>Concepts of Genetics</b>	<ul style="list-style-type: none"> <li>• Mendelian Genetics,</li> <li>• Role of chromosome in inheritance,</li> </ul>
Dec.	23	<b>Concepts of Genetics</b>	<ul style="list-style-type: none"> <li>• Multiple Alleles, Linkage and crossing over, Genetic Recombination, Genetic mapping, Gene Intereaction, Sex linked inheritance, Extranuclear inheritance, Quantitative inheritance, Population Genetics</li> </ul>
Jan	25	<b>Genes and Genomes: Structure and Function</b>	<ul style="list-style-type: none"> <li>• DNA as genetic material</li> <li>• Transforming principle</li> <li>• DNA replication, Transcription and Translation</li> <li>• Regulation of gene expression, Mutation and DNA repair</li> <li>• Human genetic disorders</li> <li>• Pedigree analysis</li> <li>• Genomes</li> </ul>

Feb	23		<ul style="list-style-type: none"> <li>• <b>Presentation on following topics</b></li> <li>• Biochemical Transformations</li> <li>• Carbohydrate metabolism</li> <li>• Photosynthesis</li> </ul> <p style="text-align: right;"><b>Revision for term-2</b></p>
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