

**SUBJECT- CHEMISTRY****CLASS-XI**

Month	Split up concepts	No. of periods
June & July	Unit I – Some basic concepts of Chemistry Unit II – Structure of atom Unit III - Classification of elements and periodicity in properties  <b>FIRST TERM UNIT TEST</b>	<b>23</b>
August	Unit IV- Chemical bonding and molecular Structure Unit V – States of matter : gases and liquids	<b>23</b>
September	Unit VI- Thermodynamics Unit VII – Equilibrium <b>SECOND TERM UNIT TEST</b>	<b>24</b>
October	Unit VIII – Redox reactions UNIT IX-Hydrogen	<b>14</b>
November	UNIT X- S-BLOCK ELEMENTS Unit XI – Some p-block elements  <b>REVISION AND HALF-YEARLY EXAM</b>	<b>13</b>
December & January	Unit XII – Organic chemistry – Some basic principles and techniques Unit XIII – Hydrocarbons classification of hydrocarbons  3 <sup>RD</sup> UNIT TEST	<b>30</b>
February	Unit XIV – Environmental Chemistry  <b>REVISION</b>	<b>22</b>
March	<b>SESSION ENDING EXAM</b>	

## Summer Vidyalayas Split up syllabus for Practicals –XI

MONTH	EXPERIMENTS	No OF PERIODS
JUNE	<p>A. Basic Laboratory Techniques</p> <ol style="list-style-type: none"> <li>1. Cutting glass tube and glass rod</li> <li>2. Bending a glass tube</li> <li>3. Drawing out a glass jet</li> <li>4. Boring a cork</li> </ol>	4
JULY	<p>B. Characterization and Purification of Chemical Substances</p> <p>Crystallization of an impure sample of any one of the following: alum, copper sulphate, benzoic acid.</p> <p>C. Experiments based on pH</p> <p>Any one of the following experiments:</p> <p>Determination of pH of some solutions using pH paper or universal indicator.</p> <p>Compare the pH of solutions of strong and weak acids of same concentration.</p>	2
AUGUST	<p>D. Chemical Equilibrium</p> <p>One of the following experiments:</p> <p>(a) Study the shift in equilibrium between ferric ions and thiocyanate ions by increasing/decreasing the concentration of either ions.</p> <p>(b) Study the shift in equilibrium between chloride ions by changing the concentration of either of the ions.</p> <p>E. Thermochemistry</p> <p>Any one of the following experiments</p> <ol style="list-style-type: none"> <li>(1) Enthalpy of dissolutions of copper sulphate or potassium nitrate.</li> <li>(2) Enthalpy of neutralisation of strong acid (HCl) and strong base (NaOH).</li> <li>(3) Determination of enthalpy change during interaction between acetone and chloroforms</li> </ol>	4
SEP	<p>F. Quantitative estimation</p>	6

	<ul style="list-style-type: none"> <li>• Using a chemical balance.</li> <li>• Preparation of standard solution of oxalic acid.</li> <li>• Determination of strength of a given solution of sodium hydroxide by titrating it against standard solution of oxalic acid.</li> <li>• Preparation of standard solution of sodium carbonate.</li> <li>• Determination of strength of a given solution of hydrochloric acid by titrating it against standard sodium carbonate solution.</li> </ul> <p>G. Qualitative Analysis</p> <p>Determination of one cation &amp; one anion in a given salt</p> <p>Cations – <math>Pb^{2+}</math>, <math>Cu^{2+}</math>, <math>As^{3+}</math>, <math>Al^{3+}</math>, <math>Fe^{3+}</math>, <math>Mn^{2+}</math>, <math>Zn^{2+}</math>, <math>Co^{2+}</math>, <math>Ni^{2+}</math>, <math>Ca^{2+}</math>, <math>Sr^{2+}</math>, <math>Ba^{2+}</math>, <math>Mg^{2+}</math>, <math>NH_4^+</math></p> <p>Anions- <math>CO_3^{2-}</math>, <math>S^{2-}</math>, <math>SO_3^{2-}</math>, <math>SO_4^{2-}</math>, <math>NO_2^-</math>, <math>NO_3^-</math>, <math>Cl^-</math>, <math>Br^-</math>, <math>I^-</math>, <math>PO_4^{3-}</math>, <math>C_2O_4^{2-}</math>, <math>CH_3COO^-</math></p> <p>(Insoluble salts excluded)</p>	14
OCT	H. Extra Elements- nitrogen, sulphur, chlorine, bromine & iodine in an organic compound.	4
NOV	PROJECT	6
DEC	Scientific investigation involving laboratory testing & collecting information from other sources.	4
JAN		