Lesson Plan

Name of the Institute:	**C. V. Raman Polytechnic**
Department:	**Basic Science**
Semester/Division/Branch:	**1st sem/All Branches**
Subject Name:	**Applied Chemistry**
Total No. of Class (Required):	**60**
Faculty Name:	**Dr Jayashree Samantray**

Class No.	*Brief description of the Topic/Chapter to be taught*	Remarks
1	**Unit 1: Atomic structure :** Fundamental particles	
2	Rutherford's Atomic model	
3	Bohr's Atomic model	
4	Hydrogen Spectrum Explanation Based on Bohr's Model of an Atom	
5	Heisenberg's Uncertainty Principle	
6	Orbital Concept and Shapes of s, p, d and f Orbitals	
7	Quantum Numbers	
8	Pauli's Exclusion Principle	
9	Hund's Rule of Maximum Multiplicity	
10	Aufbau Rule	
11	Electronic Configuration	
12	Chemical Bonding : Definition , types	
13	Electrovalent bond with examples	
14	Covalent bond with examples	
15	Coordinate bond with examples	
16	Hydrogen Bonding & Metallic Bonding	

17	Solution: The idea of Solute, Solvent, and Solution	
18	Methods to Express the Concentration of Solution	
19	**Unit 2 : Water: An Introduction**	
20	Causes of Hard Water	
21	Graphical presentation of Water Distribution on Earth	
22	Quantitative Determination of Water Hardness by ETDA Method	
23	Water Softening Techniques	
24	Municipal Water Treatment	
25	Indian Standard Specification of Drinking Water – An Introduction	
26	Water for Human Consumption	
27	**Unit 3 : Engineering Materials**	
28	Introduction to Natural Occurrence of Metals	
29	Composition Based Applications	
30	Polymers	
31	Vulcanization of Rubber	
32	**Unit 4 : Chemistry of Fuels and Lubricants**	
33	Fuel and Combustion of Fuel- An Introduction	
34	Calorific Values & its calculation	
35	Analysis of Coal Chemical Composition,	
36	Calorific Values and Applications of Fuel	
37	Lubrication – An Introduction	
38	Functions of Lubricant	
39	Characteristic Properties of Good Lubricant	
40	Classification of Lubricants	
41	Mechanism of Lubrication	

42	Physical Properties of Lubricant	
43	Viscosity,	
44	Viscosity Index	
45	Chemical Properties of Lubricants.	
46	Doubt Clearing Class	
47	**Unit 5 : Electro Chemistry:** An Introduction	
48	Electrolytes and Non Electrolytes	
49	Faradays Laws of Electrolysis	
50	Industrial Application of Electrolysis	
51	Fuel Cell & Solar Cell	
52	Application of Redox Reactions in Electrochemical Cells	
53	Corrosion – An Introduction	
54	Factors influencing Rate of corrosion.	
55	Internal Corrosion Preventive Measures	
56	External Corrosion Preventive Measures	
57	Revision	
58	Revision	
59	Doubt Clearing Class	
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Tayashree Samantray