

1st Term : 18 August 2015-27 December 2015 (80 Working days)				
Week No	Duration/ Dates	No of W. Days	Contents	Practical Experiments
1	18 Aug 2015 To 21 Aug 2015	04	Chapter No. 1: Stoichiometry Mole and Avogadro's Number Mole calculations	1. Estimation of Barium ions gravimetrically
2	24 Aug 2015 To 28 Aug 2015	05	Percentage composition Excess and Limiting Reactants	2. Demonstration of diffusion of gases
3	31 Aug 2015 To 04 Sep 2015	05	Theoretical and Actual yields Exercise	3. Separation of a mixture of inks by paper chromatography
4	07 Sep 2015 To 11 Sep 2015	05	Chapter No. 2: Atomic Structure Discharge tube experiments Bohr's atomic model	4. Separation of ions from a given mixture of their salts by paper chromatography
5	14 Sep 2015 To 18 Sep 2015	05	Derivations of radius, energy, wavelength, frequency and wave number Hydrogen atom spectrum Bohr's theory (defects) Plank's quantum theory X-rays Quantum numbers and orbitals	5. Separation of lead and chromium ions by paper chromatography
6	21 Sep 2015 To 25 Sep 2015 [EidulAzha]	02	Electronic configuration and rules Exercise	6. Prove that loss of thermal energy causes cooling
7	28 Sep 2015 To 02 Oct 2015	05	1st Bimonthly Test	
8	05 Oct 2015 To 09 Oct 2015	05	Chapter No. 3: Theories of Bonding and Shapes of Molecules Theories: VSEPR, VBT (resonance), MOT	7. Crystallization of benzoic acid
9	12 Oct 2015 To 16 Oct 2015	05	Bond properties: bond length, bond energy, ionic character, dipole moment	8. Purification of sodium chloride using common ion effect principle
10	19 Oct 2015 To 23 Oct 2015 [Ashura]	03	Bonding effects on physical and chemical properties Exercise Chapter No. 4: Gases Kinetic molecular theory (KMT) Pressure and its units Absolute T scale Gas Laws: Boyle's Law, Charle's Law, Avogadro's Laws	9. Demonstration of Le-chatelier's principle

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11	26 Oct 2015 To 30 Oct 2015	05	General Gas equation (ideal gas law) Vanderwaals equation (real gas law) Dalton's law Graham's law	10. Acid- base titration: Determine the exact molarity of given H_2SO_4 and calculate its volume required to make 500 mL of 0.02 M H_2SO_4
12	02 Nov 2015 To 06 Nov 2015	05	Liquefaction of gases : Joule Thomson effect and Linde's method Plasma Exercise	11. Determine the percentage of NaOH in the given solution volumetrically.
13	09 Nov 2015 To 13 Nov 2015 [Iqbal Day]	04	Chapter No. 5: Liquids K.M.T of liquids Intermolecular forces: dipole-dipole, H- bonding, London dispersion forces Energetics of phase changes Exercise	12. Determine the value of x in the given sample of $6.3 \text{ g} (COOH)_2 \cdot x H_2O$ dissolved per dm^3
14	16 Nov 2015 To 20 Nov 2015	05	Chapter No. 6: Solids KMT of solids Properties of solids Types: crystalline and amorphous Properties of crystalline solids Crystal lattice Types of crystalline solids: ionic, covalent, molecular and metallic solids Exercise	13. Determine the solubility of oxalic acid at room temperature volumetrically
15	23 Nov 2015 To 27 Nov 2015	05	Chapter No. 7: Chemical Equilibrium Reversible reactions Dynamic equilibrium Law of mass action	14. Show that the addition of a catalyst increases the rate of a chemical reaction
16	30 Nov 2015 To 04 Dec 2015	05	Expression and interrelationship of: K_c, K_p, K_n, K_x Le-Chatelier's principle Its applications Solubility product (K_{sp}) Common ion effect Exercise	15. Determine the heat of neutralization of NaOH and HCl.
17	07 Dec 2015 To 11 Dec 2015	05	<u>1st Term Exams (Send – Up Exams)</u>	
18	14 Dec 2015 To 18 Dec 2015	02	<u>1st Term Exams (Send – Up Exams)/All Pakistan Prize Distribution Ceremony of Co-curricular Activities</u>	
19	21 Dec 2015 To 25 Dec 2015	-	<u>Winter Vacation</u>	

2nd Term: 28 December 2015-12 April 2016 (75 Working Days)				
Week No	Duration/ Dates	No of W. Days	Contents	Practical Experiments
20	28 Dec 2015 To 01 Jan 2016	05	<u>Chapter No. 8: Acids, Bases and Salts</u> Acidic, basic, amphoteric substances Bronsted Lowry theory Conjugate acid base pairs Ionization of water pOH, pH, pK _w	16. Standardize the given solution of KMnO ₄ and calculate its volume required to prepare 1 dm ³ of 0.01 M KMnO ₄ solution volumetrically
21	04 Jan 2016 To 08 Jan 2016	05	K _a and pK _a K _b and pK _b Relationship between K _a and K _b Leveling effect Lewis theory Buffer solutions Salt hydrolysis Exercise	17. Determine the amount of iron volumetrically in the given sample
22	11 Jan 2016 To 15 Jan 2016	05	<u>Chapter No. 9: Chemical Kinetics</u> Rates of reactions Rate law Rate constant and its units Order of reaction	18. Determine the percentage composition of a solution mixture of K ₂ C ₂ O ₄ and K ₂ SO ₄ volumetrically
23	18 Jan 2016 To 22 Jan 2016	05	Collision theory Transition state Activation energy Catalysis: characteristics, homogeneous, heterogeneous and enzyme catalysis Exercise <u>Chapter No. 10: Solution and Colloids</u> General properties	19. Determine the solubility of Mohr's salt at room temperature volumetrically
24	25 Jan 2016 To 29 Jan 2016	05	Concentration units Percentage composition, molarity, molality, mole fraction, related numericals	Practical Revision
25	01 Feb 2016 To 05 Feb 2016 [Kashmir Day]	04	Raults law Colligative properties Colloids Exercise	Practical Revision
26	08 Feb 2016 To 12 Feb 2016	05	<u>2nd Bimonthly Test</u>	

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27	15 Feb 2016 To 19 Feb 2016	05	Chapter No. 11: Thermochemistry Thermochemical reactions: endo and exothermic Thermodynamics Enthalpy and internal energy Laws of thermodynamics Standard states and enthalpy changes Heat capacity	Practical Revision
28	22 Feb 2016 To 26 Feb 2016	05	Calorimeter Hess's law Born haber cycle and its application Exercise	1 st Test of Test Series
29	29 Feb 2016 To 04 Mar 2016	05	Chapter No. 12: Electrochemistry Oxidation and reduction, Oxidation number Balancing of redox equations Electrode, electrode potential and electrochemical series	2 nd Test of Test Series
30	07 Mar 2016 To 11 Mar 2016	05	Electrochemical cells: electrolytic and voltaic cells Batteries Corrosion and its prevention Exercise	3 rd Test of Test Series
31	14 Mar 2016 To 18 Mar 2016	05	Revision and Discussion	4 th Test of Test Series
32	21 Mar 2016 To 25 Mar 2016 [Pakistan Day]	04	Revision and Discussion	5 th Test of Test Series
33	28 Mar 2016 To 01 Apr 2016	05	<u>Pre-Board Examination</u>	
34	04 Apr 2016 To 08 Apr 2016	05	<u>Pre-Board Examination</u>	
35	11 Apr 2016 To 15 Apr 2016	02	<u>Pre-Board Examination/ Prep Leave</u>	