

Lesson Plan → Chemistry → Sem - II  
Session 2019-20

Class: (B.Sc (Med + Non-Med))  
Subject: Chemistry (CCL-204)  
Semester-2nd (CCL-205)

Session 2019-20

Practical Timing: - 1:30 to 2:50 pm.

Date	Lecture	Topic of Lecture
01.01.2020	1- Unit-I:-	Chemical Energetics → Intro
02.01.2020		Guru Gobind Singh Jayanti
03.01.2020	2.	Review of thermodynamics
04.01.2020	3.	Laws of thermodynamics
05.01.2020		Sunday
06.01.2020	4.	Imp. principles & Definition of thermochemistry
07.01.2020	5.	Concept of standard state
08.01.2020	6.	Concept of standard enthalpy of formation
09.01.2020	7.	Doubt
10.01.2020	8.	Test
11.01.2020	9.	Enthalpy of Neutralisation, Hess's law
12.01.2020		Sunday
13.01.2020	10.	Calculation of bond energy
14.01.2020	11.	Bond diso. energy & Resonance energy
15.01.2020	12.	Variation of enthalpy of rxn
16.01.2020	13.	Thermochemical Data
17.01.2020	14.	Third law of thermodynamics
18.01.2020	15.	Calculation of Absolute entropies
19.01.2020		Sunday
20.01.2020	16.	Doubt class, Assignments - I
21.01.2020	17.	Test
22.01.2020	18.	Unit-II:- Chemical equ. (Intro)
23.01.2020	19.	Free energy change in a rxn
24.01.2020	20.	Presentation → (on thermo)
25.01.2020	21.	Presentation → (on thermo)
26.01.2020		Sunday/Republic Day
27.01.2020	22.	Thermodynamic derivation of equilibrium
28.01.2020	23.	Distinction b/w $\Delta G$ & $\Delta G^\circ$
29.01.2020	24.	Doubt class
30.01.2020		Basant Pami/Shri Chhotu Ram Jayanti
31.01.2020	25.	Test (Chemical equilibria)
01.02.2020	26.	Le-Chatelier principle
02.02.2020		Sunday

Pract: → Determination of no. of water mol. in Mohr's salt

Pract: → Estimation of oxalate conc.

Pract: → Estimation of Fe(II) with  $K_2Cr_2O_7$

Pract: → Estimation of Cu(II)

Pract: → Detection of extra element

Pract: → Detection of extra element

Pract: → Detection of extra element

Pract: → Detection of extra element

03.02.2020	27.	Relationship b/w $K_p$ , $K_c$ & $K_x$ Pr: $\rightarrow$ Chromatography
04.02.2020	28.	Unit-III:- Ionic equilibria- I (Intro) Pr: $\rightarrow$ Chromatography
05.02.2020	29.	Strong, moderate & weak electrolyte
06.02.2020	30.	Factors affecting degree of ionisation
07.02.2020	31.	Ionisation constant & Ionic product of $H_2O$
08.02.2020	32.	Ionisation of weak acid & base
09.02.2020		Sunday/Guru Ravidas's Birthday
10.02.2020	33.	pH scale, common ion effect Pr: $\rightarrow$ Determination of m.pt.
11.02.2020	34.	Unit-IV:- Ionic equilibria- II (Intro) Pr: $\rightarrow$ Preparation of org. compound
12.02.2020	35.	Doubt class of (Ionic equilibria- I)
13.02.2020		
14.02.2020		Unit Test
15.02.2020		
16.02.2020		Sunday
17.02.2020	36.	Basic terms used in ionic equilibria Pr: $\rightarrow$ Preparation
18.02.2020	37.	Salt hydrolysis & calculation of hydrolysis const. Pr: $\rightarrow$ Preparation of org. compound
19.02.2020	38.	Degree of hydrolysis & pH for diff. salts
20.02.2020	39.	Buffer sol <sup>n</sup> .
21.02.2020		Maha Shivratri
22.02.2020	40.	Solubility & Solubility product Pr
23.02.2020		Sunday
24.02.2020	41.	App. of Solubility product principle Pr: $\rightarrow$ Preparation
25.02.2020	42.	Doubt class Pr: $\rightarrow$ Determination of surface tension
26.02.2020	43.	Test (Ionic - Equilibria - II)
27.02.2020	44.	Unit-I:- Org:- Aromatic hydrocarbon
28.02.2020	45.	Method of preparation
29.02.2020	46.	Rxn's $\rightarrow$ Electrophilic substitution (Nitration)
01.03.2020		Sunday
02.03.2020	47.	Halogenation & Sulphonation $\rightarrow$ Pr $\rightarrow$ Determination of viscosity
03.03.2020	48.	Friedel craft reaction Pr $\rightarrow$ Sublimation process.
04.03.2020	49.	Side chain oxidation of alkyl benzene
05.03.2020	50.	Doubt of Unit-I (Org.), <u>Assignment-II</u>
06.03.2020	51.	Test
07.03.2020	52.	Test Discussion.
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12.03.2020		Holi Break

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53. Unit-II:- Alkyl halides (Intro) Prc:-> Revision-> Titration

54. Types of nucleophilic substitution,  $S_N1$  Prc-> Revision-> Titration

55.  $S_N2$  &  $S_Ni$  rxn,

56. Method of preparation

57. Reactions -> Hydrolysis, nitrite & nitro formation

58. Nitrite & isonitrite formation

Sunday

Shahidi Diwas

59. Williamson's ether synthesis Prc-> Revision-> Chromatography

60. Aryl Halides:- Method of preparation Prc-> Revision

61. Doubt class of Unit-II (half part)

62. Test

63. Revision of Method of preparation of Aryl halides

Sunday

64. Reactions -> Aromatic nucle sub. Prc-> Revision-> Detection

65. Effect of nitro substituent Prc-> Revision-> Detection

66. Benzyl mechanism

Ram Navmi

67. Reactivity & Relative strength of C-halogen bond

68. Doubt class

Sunday

Mahavir Jayanti

69. Test -> (Aryl halides) Prc-> Revision-> Preparation's

70. Unit-III:- Alcohol, phenol & ether -> Method of prep.

71. Ester hydrolysis, Reduction of Aldehydes, ketones, esters

72. Reaction with sodium, HX, esterification

73. Oxidation, Oppenauer oxidation, Rearrangement

Sunday

74. Doubt class

Dr. B.R. Ambedkar's Jayanti

75. Phenol :-> Introduction

76. Method of preparation

77. Rxn -> Reimer-Tiemann Rxn,

78. Houben-Hoesh condensation, Schotten-Baumann Rxn.

Sunday

79. Test of Unit-III.

21.04.2020	80. Unit-IV: Aldehyde & Ketones (Intro)
22.04.2020	81. Method of Preparation
23.04.2020	82. Reaction with HCN, R-OH, NaHSO <sub>3</sub>
24.04.2020	83. Reaction with NH <sub>2</sub> -G, Iodoform test
25.04.2020	84. Aldol condensation, Cannizzara test
26.04.2020	Sunday
27.04.2020	85. Wittig, Benzoin cond., Clemenson, Wolf Kühner, MPV
28.04.2020	86. Doubt class.
29.04.2020	87. Test
30.04.2020	88. Doubt from all syllabus.