

St. Joseph's College of Arts and science
(Autonomous)
Cuddalore-1

PG & RESEARCH DEPARTMENT OF CHEMISTRY

Offers

VALUE ADDED COURSE

ON

**BASIC CHEMISTRY FOR
COMPETITIVE EXAMINATIONS**

Objectives

- Students may get the exposure on various competitive examinations.
- Students can be equipped to solve the descriptive and objective types of problems.
- Students can learn the tricks for solving the numerical problems on various parts of chemistry

* Start Date : 01.03.2019

* End Date : 15.03.2019

Course Fee
Rs. 250 only

3 Hours / Day
Total Hours - 30

For more details

Course Coordinator

MR. G. ANAND
ASSISTANT PROFESSOR
DEPARTMENT OF CHEMISTRY

Convener

MR. T. ANTONY SANDOSH
PROFESSOR & HEAD
DEPARTMENT OF CHEMISTRY

ST. JOSEPH'S COLLEGE OF ARTS AND SCIENCE (AUTONOMOUS)

CUDDALORE-607001

VALUE ADDED COURSE – 2018-2019

Course Title : **BASIC CHEMISTRY FOR COMPETITIVE EXAMINATIONS**

Course Code : **VACH 01**

Department : **CHEMISTRY**

Course Coordinator : **G. ANAND**

List of Faculty : **1. G. ANAND**

2. S. IMMANUEL

3. K. VENGADESAN

4. ALBERT NIKSON

5. C. ADAIKALARAJ

No. of Students Enrolled : **34**

No. of Students Completed : **34**

Course Fee : **Rs. 250**

Batch : **I**

Eligibility : **ALL UG STUDENTS OF SHIFT-1**

Class Hours per Day : **3 HOURS**

Timing : **2:00 PM TO 5:00 PM**

Date : **01.03.2019 to 13.03.2019**


COURSE COORDINATOR


HEAD OF THE DEPARTMENT

St. Joseph's College of Arts and Science (Autonomous), Cuddalore-607001

VALUE ADDED COURSE-2018-2019

Nominal Role

Department: Chemistry

Course Title: Basic Chemistry for Competitive Examinations

Course Code: VACH01

Batch: I

S. No	Reg. No	Name of the Student
1	A18CHD01	A.ARAVIND KUMAR
2	A18CHD08	BALAJI A
3	A18CHD09	BALAJI K
4	A18CHD11	BHARATHIDHASAN V
5	A18CHD12	G.BHUVANESHWARAN
6	A18CHD16	M.DHILIPRAJ
7	A18CHD23	D.IYYANAR
8	A18CHD29	A.KAVINKUMAR
9	A18CHD33	S.PRAKESH
10	A18CHD36	R.RAGHU RAMAN
11	A18CHD40	N.SABARINATHAN
12	A18CHD43	S.SIVAGURU
13	A18CHD44	L.SIVANESAN
14	A18CHD49	J.UMAR SHARIF
15	A18CHD59	B.YADHAVAN
16	A17CHD02	A. ABINASH
17	A17CHD06	A. ARAVINDHAN
18	A17CHD13	P. DHINESH KUMAR
19	A17CHD43	R. RANJITH KUMAR
20	A17CHD49	G. SELVAKUMAR
21	A16CHD11	V. GUNASEELAN
22	A16CHD19	V. JEGADEESH
23	A16CHD26	D. MOHAN
24	A16CHD29	V. POOBALAN
25	A16CHD31	A. PRITHIVRAJ
26	A16CHD36	P. RAJ
27	A16CHD40	P. RANJITH KUMAR
28	A16CHD54	T. THENNARASU
29	A16CHD52	P. SUDHAKAR
30	A16CHD10	M. BALAJI
31	A16CHD30	P. PRAKASH
32	A16CHD33	PUVANESWARAN
33	A16CHD43	SASIKUMAR IMMANUEL SELVARAJ R
34	A16CHD32	R. PRITHIVI RAJAN
Total number of Students: THIRTY FOUR		


Course Coordinator


Head of the Department

ST. JOSEPH'S COLLEGE OF ARTS & SCIENCE (AUTONOMOUS)

CUDDALORE – 607001

VALUE ADDED COURSE

SYLLABUS

CHEMISTRY	BASIC CHEMISTRY FOR COMPETITIVE EXAMINATIONS	VACH01

OBJECTIVES

- *To study the important concepts of all parts of chemistry*
- *To understand the chemistry of industrial applications*
- *To learn the various parameters of analytical chemistry for quantitative measurements*

Unit – I

(6 Hrs)

Inorganic chemistry

Periodicity – Hund's rule – Aufbau principle – Pauli principle – electronic configurations of s, p, d and f block elements – types of solvents – polarity of solvents – coordination compounds – definitions of terms – calculation of net charge – oxidation states both inorganic and coordination compounds – types of ligands

Unit – II

(6 Hrs)

Analytical chemistry

Mole concept – molarity – molality – normality – mole fraction – parts by weight – parts by volume – parts per thousand – parts per million – definition and problems – application of law of normality on volumetric analysis – acid base – redox – and complexometric titrations – theories of indicators – Beer-Lambert law – definition for Hard water, soft water, desalination, demineralization, BOD and COD – distillation – steam distillation – vacuum distillation – brief introduction to column chromatography

Unit – III**(6 Hrs)****Physical chemistry**

Gaseous laws – Ideal and kinetic gas equations – equilibrium – equilibria involving physical processes – Henry's law – law of chemical equilibrium – effects of catalyst – Le Chatlier's principle – pH scale – common ion effect – redox reaction – assigning oxidation number – electrochemistry – Kohlrausches law and its applications – types of electrodes – Nernst equation and its applications – buffer solutions – types of buffer solutions

Unit – IV**(6 Hrs)****Organic chemistry – I**

Nomenclature of alkanes, alkenes, alkynes, cyclic compounds - aromatic compounds – reactions of alkanes – halogenation by free radical method – reactions of alkenes – electrophilic addition – hydrogenation – halogenations – hydrohalogenation – reactions of alkynes – hydrogenation-halogenations – hydrohalogenation – cycloalkenes – angular strain theory – applications of SN1, SN2, SNi reactions – elimination reactions E1 and E2 – aromatic electrophilic substitution reactions

Unit – V**(6 Hrs)****Applied chemistry**

Soaps and Manufacture of soaps – Lubricants and mechanism of lubricants – Fertilizers and NPK fertilizers – advanced antibiotics – pharmacopoeia – antioxidants – chemotherapy – radiotherapy – soil chemistry – types of soils –

REFERENCES

1. B.Y. Paula Yurkanis Bruise, Organic Chemistry, 3rd edition, Pearson education, New Delhi 2002
2. B.K.Sharma, Industrial Chemistry, 17th edition, Goel Publishing House, Meerut 2004
3. R.D. Madan, Modern Inorganic Chemistry, 3rd edition, Sulthan Chand Publication 1988
