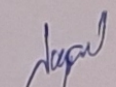


## COURSE OUTCOMES

- \* ACD Chem Sketch software:-  
Introduction, download and installation process, Drawing various chemical structures (acyclic, cyclic, polycyclic, heterocyclic), name generation from structures, conversion of name of molecule into its structure, calculation of physical properties such as density, molecular weight, molecular formula, refractive index from structural formula, bond angles, bond lengths, dihedral angles
- \* downloading research papers using keywords in Scopus, Science direct, and google scholar, reaction search, product search, reactant search, structure search, markush search using Sci-finder. Introduction to End Note and its applications.

  
Head, Dept. of Chemistry  
L.V.D. College, RAICHUR.


## Objectives

Department of chemistry LVD College, Raichur offers 30 hours Certificate course in hands on training of basic chemistry softwares. This course aimed at imparting skills on use of various open source chemistry tools that are essential for any student or researcher with chemistry as a major subject. At the end of course, the participants will be able to use these softwares for drawing chemical structures, generation of their names, structure calculations, chemical reaction pathways prediction

Eligibility-  
All B.Sc. final year students

## TO JOIN CONTACT-

- \* Dr. Arjanaya Oblesha
- \* Miss. S. Smeen

  
PRINCIPAL  
Laxmi Venkatesh Desai College,  
RAICHUR.



Taranath Shikshana Samsth

Laxmi Venkatesh Desai college, Raichur

Re-Accredited by NAAC with B grade

Department Of Chemistry  
2022-23



Certificate Course In Hands  
On Training Of  
"Basic Chemistry  
Software's "

CHEMISTRY



**Taranath Shikshana Samsthe**  
**Laxmi Venkatesh Desai College, Raichur**  
Affiliated to Gulbarga University, Kalaburagi & Re-accredited by NAAC with B Grade



**Index for Add-On Course**

**Title : Certificate Course in Hands on Training of Basic Chemistry Software's**

**Academic year : 2021 – 2022**

S.No	Particulars	Page no
1	Declaration	1
2	Permission letter	2
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6	Timetable	8
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Taranath Shikshana Samsthe

**LAXMI VENKATESH DESAI COLLEGE, RAICHUR-584103.**  
(Affiliated to Raichur University, Raichuri. Re-Accredited by NAAC with "B" Grade)

Dr. Venkatesh B. Devaru, *M.Sc., Ph.D., MBA.*  
PRINCIPAL

Office of the Principal  
Ph: (08532)-240286, 240707  
Fax: +918532 240707  
e-mail: [lvdrcc@gmail.com](mailto:lvdrcc@gmail.com)  
Website: [www.lvdcollege.com](http://www.lvdcollege.com)

Date: 22-03-2022

TO WHOMEVER IT MAY CONCERN

This is to certify that, the college has introduced the Add\_On course on, "Certificate Course in Hands on Training of Basic Chemistry software's" with the duration of 30 hours introduced in 2022. The said programme is apart from the existing course curriculum.

Head of the Department  
*Head, Dept. of Chemistry*  
**L.V.D. College, RAICHUR.**

Principal  
**PRINCIPAL**  
Laxmi Venkatesh Desai College,  
RAICHUR.

Date: 10-01-2022

To  
The Principal,  
LVD College, Raichur.

From  
HoD,  
Chemistry Department.

Respected Sir,

Sub: Permission to start an Add\_On course

With respect to the above cited subject I, the undersigned request you to grant permission to start an Add-on course titled **"Certificate course in Hands on Training of Basic chemistry software's"** to **undergraduate students**. The details of syllabus and duration are enclosed. This course helps students to build up their skills. Kindly grant the permission.

Thanking You,

Yours Faithfully,  
Head, Dept. of Chemistry  
L.V.D. College, RAICHUR.

Permitted

PRINCIPAL  
L.V.D. College, RAICHUR-03.

Taranatha Shikshana Samsthe

**Laxmi Venkatesh Desai College, Raichur**

(Affiliated to Raichur University Raichur, Reaccredited with "B"grade)

Dr. Venkatesh B Devaru  
MSc., PhD., MBA

Principal

office of the principal  
Ph:(08532) - 240286,240707  
Fax: +918532 240707  
email: [lvdrer@gmail.com](mailto:lvdrer@gmail.com)  
website: [www.lvdcollege.com](http://www.lvdcollege.com)

Date: 22-02-2022

**ORDER Sub: Meeting of Board of Studies members**

A meeting of the following BOS constituted is hereby convened on 22-02-2022 at 11:00 AM in the Department of Chemistry, LVD College, Raichur

**BOARD OF APPOINTMENT OF BOS MEMBERS FOR ADD-ON COURSE**

1)	DR. Vittal Reddy Associate Professor Department of Chemistry BVB College Bodar	Chairman <i>Vittal Reddy</i>
2)	DR. Pushpa Assistant Professor Department of Chemistry GFGC , Raichur	Member <i>Pushpa</i> PRINCIPAL Govt. First Grade College For Womens RAICHUR-584 101
3)	Dr. Jayateertha N.S Department of Chemistry LVD College, Raichur	Member <i>Jayateertha N.S</i> Head, Dept. of Chemistry L.V.D. College, RAICHUR.

The Chairman and the members are requested to make it convenient to attend THE BOS Meeting



*[Signature]*  
PRINCIPAL  
PRINCIPAL  
L.V.D. College, RAICHUR

(4)

Date: 28-02-2022

To  
The Principal,  
LVD College,  
Raichur.

Respected Sir,

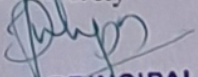
**Sub: Acceptance to be a Member of BOS.**

with reference to the above-cited subject I, Smt. Pushpa Assistant Professor,  
Department of Chemistry, GFGC, Raichur, received your letter of request to  
be a Member of BOS, for the Add-on Course to be conducted by your college

Hence, I give my consent and accept your request as a BOS Member.

Thanking You,

Yours Sincerely



**PRINCIPAL**

**Govt. First Grade College For Womens**

**RAICHUR-584 101**

# LaxmiVenkatesh Desai College, Raichur

Affiliated to Gulbarga University, Kalaburagi & Re-Accredited by NAAC with B Grade

## Department of Chemistry

### Notice

All the **B.Sc VI Semester** students are here by informed to join and get benefit of the Add-on course titled "**Certificate course in Hands on Training of Basic chemistry software's**" starting from

**22<sup>nd</sup> March, 2022 at 5 to 6 pm**

This course enables you to create awareness about the importance of chemistry software's for the advance learning of subject; hence it is most useful to the students in future.

Signature of HoD  
Head, Dept. of Chemistry  
L.V.D. College, RAICHUR.

PRINCIPAL  
L.V.D. College, RAICHUR-03.

B.Sc VI sem

B.Sc VI sem

(B.Sc VI sem)

## Certificate course in Hands on Training of Basic Chemistry Softwares (30 Hour)

### Objectives

Department of chemistry L V D College, Raichur offers 30 hours **Certificate course in hands on training of basic chemistry softwares**. This course aimed at imparting skills on use of various open source chemistry tools that are essential for any student or researcher with chemistry as a major subject. At the end of course, the participants will be able to use these softwares for drawing chemical structures, generation of their names, retrieve information about physical properties calculations, three-dimensional molecular structure calculations, spectroscopic signatures, chemical reaction pathways prediction, molecular functional groups, docking sites predictions, and other parameters efficiently.

Eligibility– All B.Sc. final year students having chemistry as major subject and all M.Sc. Chemistry students are eligible

Number of seats-30

Evaluation Process– Assessment of candidates will be done through theoretical assignments, projects & practical examinations after completion of each module. All successful candidates will be awarded with certificates.

### Contents for certificate course in hands on training of basic chemistry softwares

**Module 1 (4 hours): ACD ChemSketch software**– Introduction, download and installation process, Drawing various chemical structures (acyclic, cyclic, polycyclic, heterocyclic), name generation from structures, conversion of name of molecule into its structure, calculation of physical properties such as density, molecular weight, molecular formula, refractive index from structural formula, bond angles, bond lengths, dihedral angles.

**Learning outcomes**:- After successful completion of this module candidate will be able to use ACD ChemSketch for generation and processing of simple and complex chemical structures.

### **Module 2 (5 hours)**

**Cambridge ChemDraw Ultra software**– Introduction, download and installation process, Drawing various chemical structures (acyclic, cyclic, polycyclic, heterocyclic), nomenclature generation, conversion of name into molecular structure, calculation of physical properties such as density, molecular weight, molecular formula, refractive index from structural formula.  $^1\text{H}$ ,  $^{13}\text{C}$  NMR prediction from molecular structure, Drawing structure of bigger molecules such as proteins, carbohydrates, and RNA/DNA, bio arts, use of templates, Comparison of ACD ChemSketch and Cambridge ChemDraw Ultra software.



**Learning outcomes:-** After successful completion of this module candidate will be able to use Cambridge ChemDraw Ultra for generation, processing and calculation of physical/chemical properties of simple and complex molecules.

**Module 3 (8 hours)**

**Chem3D software:-** Introduction, download and installation process, 3D structure of molecules, various 3D structure models, conversion of 2D structure into 3D structure, File extensions, Cartesian coordinates, Dihedral angles, Energy minimization, calculation of surface properties, calculation of molecular electrostatic potential (MEP) surface, electrostatic potential (ESP) surface, solvent accessible surface. Atomic charge calculations, Calculation of dipole moments, MM2 calculations, Huckel calculations, Calculation of UV and IR spectra using MM2 calculations.

**Learning outcomes:-** After successful completion of this module candidate will be able to study three dimensional properties of molecules which are highly useful in prediction of their chemical/ physical properties and can be applied in advanced research work.

**Module 4 (5 hours)**

Introduction to online chemical database search, Searching and downloading research papers using keywords in Scopus, Science direct, and google scholar, reaction search, product search, reactant search, structure search, markush search using Sci-finder. Introduction to End Note and its applications.

**Learning outcomes:-** After successful completion of this module candidate will be able to use online research tools efficiently and will be able to search research papers related to their topics more efficiently.

**Module 5 (8 hours)**

**Chimera 1.12 software:-** Introduction to Chimera software, Protein-ligand Docking, Protein data bank structure search, preparation of ligands and proteins for docking, Sites searching for ligand binding analysis, Docking of simple molecules over active site of protein molecules and analysis of docking results.

**Learning outcomes:-** After successful completion of this module candidate will be able to study drug-receptor interactions through docking. The knowledge of these interactions is a fundamental requirement for modern drug discovery process.

**Salient features of certificate course**

- Theory and practical session as per curriculum
- Lectures include entire process of downloading and installation of these softwares.
- Hands on training on all these softwares
- At end of course candidate will be able to use these open source software's independently for their work.
- A certificate will be issued to the successful candidates

*[Signature]*  
**PRINCIPAL**  
 L.V.D. College, RAICHUR-03.

*[Signature]*  
**HEAD**  
 L.V.D. College, RAICHUR.

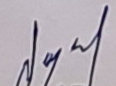


Taranath Shikshana Samsthe

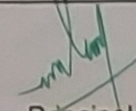
# LAXMI VENKATESH DESAI COLLEGE, RAICHUR

Time Table with effect from 22-03-2022 Class BSC VI<sup>th</sup> Sem Department CHEMISTRY Section \_\_\_\_\_ Room No. FF04

Time → Days ↓										5-6pm
Mon										CHEMISTRY ← Add on Course →
Tue										-do-
Wed										-do-
Thu										-do-
Fri										-do-
Sat										-do-

  
Head of Department  
Heads Dept. of Chemistry  
L.V.D. College, RAICHUR

Name of the Staff : Dr. Anjaneya Oblesha & Miss. Jasmeen

  
Principal  
**PRINCIPAL**  
Laxmi Venkatesh Desai College  
RAICHUR.

8

# Laxmi Venkatesh Desai College, Raichur

Affiliated to Gulbarga University, Kalaburgi & Re-Accredited by NAAC with B Grade

## Attendance Sheet

Department of Chemistry

Class: B.Sc. VI Semester

Course title: Certificate course in Hands on Training of basic chemistry software's

Faculty Name: Dr. Anjaneya Oblesha & Miss. Jasmeer

Sl.No	Register No	Name of the Student	22	23	24	25	26	28	29	30	31	01	02	04	05	06	07	08	09	08	09	11	12	13	14	15	16	18	18	19	20	21	Total Present	Signature of Student
			3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4		
			22	23	24	25	26	28	29	30	31	01	02	04	05	06	07	08	09	08	09	11	12	13	14	15	16	18	18	19	20	21		
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
1	1953113	Manikeshwari	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	A	P	P	P	P	P	27	<i>MN</i>
2	1953137	Mahesh.k	P	P	P	P	P	P	A	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	A	26	<i>MN</i>
3	1953155	Savita	A	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	28	<i>Su</i>
4	1953172	Praveen.k.	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	A	A	26	<i>B</i>
5	1953179	Laxmi	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	30	<i>Laxmi</i>
6	1953185	Meghana	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	30	<i>Meghana</i>
7	1953203	Toiveni	P	A	A	P	P	K	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	A	P	25	<i>Toiveni</i>	
8	1953221	Abhishek	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	30	<i>Abhishek</i>
9	1953212	Revati	P	P	P	P	A	P	A	P	P	P	P	P	P	P	P	P	P	P	P	A	A	P	P	P	P	A	P	P	A	24	<i>Revati</i>	
10	1953233	B. Vibha	A	P	P	P	P	P	P	P	P	P	P	P	A	A	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	26	<i>Vibha</i>	
11	1953255	Veena	P	P	A	A	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	A	P	P	P	P	25	<i>Veena</i>	
12	1953242	Ruthu	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	28	<i>Ruthu</i>	
13	1953270	Babu	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	29	<i>Babu</i>	
14	1953235	Bharat	A	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	27	<i>Bharat</i>	
15	1953315	Rahul	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	28	<i>Rahul</i>	

Signature of Faculty

*Jasmeer Anj*

Signature of HOD

Head, Dept. of Chemistry  
L.V.D. College, RAICHUR.

Signature of Principal  
**PRINCIPAL**

L.V.D. College, RAICHUR-03.

(2)

# Laxmi Venkatesh Desai College, Raichur

Affiliated to Gulbarga University, Kalaburgi & Re-Accredited by NAAC with B Grade

## Attendance Sheet

### Department of Chemistry

Class: B.Sc. VI Semester

Course title: Certificate course in Hands on Training of basic chemistry software's

Faculty Name: Dr. Anjaneya Oblesha & Miss Jasmeen

Sl.No	Register No	Name of the Student	22	22	24	25	28	29	30	31	01	02	03	04	05	06	07	08	08	08	09	09	11	12	13	14	15	16	18	19	19	20	20	Total	Signature of Student
			3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30			
16	1953281	Kaveri	P	P	A	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	A	P	P	P	P	P	P	25	Kaveri		
17	1953311	Anil	P	P	P	P	P	P	P	P	P	P	A	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	28	Anil		
18	1953358	Geeta	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	29	Geeta		
19	1953328	P.Ganesh	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	A	P	P	P	P	26	Ganesh		
20	1953406	Anjali	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	30	Anjali		
21	1953112	Lakshmana	P	A	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	26	Lakshmana		
22	1953117	Akshata.B	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	30	Akshata		
23	1953126	Ankita	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	A	P	P	P	27	Ankita		
24	1953131	Usha	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	30	Usha		
25	1953134	Najuma	A	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	26	Najuma		
26	1953147	Gayatri	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	30	Gayatri		
27	1953159	Pooja.K	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	27	Pooja		
28	1953148	Anusha	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	30	Anusha		
29	1953154	Lakshmi	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	28	Lakshmi		
30	1953143	Laxmi	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	27	Laxmi		

Signature of Faculty

*Jasmeen* *Anil*

Signature of HOD

*[Signature]*  
Head, Dept. of Chemistry  
L.V.D. College, RAICHUR.

Signature of Principal

*[Signature]*  
PRINCIPAL  
L.V.D. College, RAICHUR-03.

# Laxmi Venkatesh Desai College, Raichur

Affiliated to Gulbarga University, Kalaburgi & Re-Accredited by NAAC with B Grade

## Attendance Sheet

Department of Chemistry																																		
Class: B.Sc. VI Semester												Course title: Certificate course In Hands on Training of basic chemistry software's												Faculty Name: Dr. Anjaneya Oblesha & Miss Jasmeen										
Sl.No	Register No	Name of the Student	22	23	24	25	26	28	29	30	31	01	02	04	05	06	07	08	09	09	11	12	13	14	15	16	18	18	19	20	21	Total Present	Signature of Student	
			3	3	3	3	2	2	3	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4			4
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
31	1953150	Sangeeta	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	26	Sangeeta		
32	1953177	G. Shanti	P	P	P	A	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	24	G. Shanti	
33	1953181	S. Satish	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	30	Satish	
34	1953188	Pavithra	P	A	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	26	Pavithra	
35	1953173	Ashwini	P	P	P	P	P	A	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	26	Ashwini

Signature of Faculty

*Jasmeen* *Anj*

Signature of HOD

*Anj*  
Head, Dept. of Chemistry  
L.V.D. College, RAICHUR

Signature of Principal

*Anj*  
**PRINCIPAL**  
L.V.D. College, RAICHUR-03



**Laxmi Venkatesh Desai College, Raichur**  
Affiliated to Gulbarga University, Kalaburagi & Re-Accredited by NAAC with B Grade

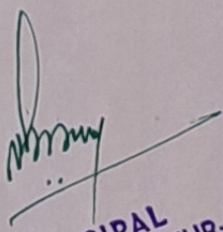
**Department of Chemistry**  
**Report of Add on course**

**Title of the Add on course :** Certificate course in Hands on Training of Basic Chemistry.  
software's

**Duration :** 30 Hours  
**Started on :** 22-3-2022.  
**Completed on :** 21-4-2022.

**Name of the faculty :** Dr. Anjaneya Oblesha, & Miss. Jasmeeen  
**Total No. of students admitted :** 35  
**Total No. of classes taken :** 30  
**Total No. of students benefited :** 35

**Learning outcomes :** After successful completion of this add on course students will be able to use ACD Chemscketch and Cambridge ChemDraw Ultra software for generation & processing of simple and complex chemical structures.

  
**PRINCIPAL**  
**L.V.D. College, RAICHUR-03.**



Taranath Shikshana Samsthe

# LAXMI VENKATESH DESAI COLLEGE RAICHUR

(Re-Accredited by NAAC with 'B' Grade)

## Certificate

This is to Certify that Miss. / Mr. Laxmi  
 of B.Sc VI Semester has completed the Certificate Course in  
Certificate Course on Training of Basic Chemistry software  
 Conducted by the Department of Chemistry from  
22-3-22 to 21-4-2022

*[Signature]*  
 Head of the Department  
 Head, Dept. of Chemistry  
 L.V.D. College, RAICHUR



*[Signature]*  
 Principal

Taranath Shikshana Samsthe's  
LAXMI VENKATESH DESAI COLLEGE, RAICHUR  
ADD ON COURSE, INTERNAL ASSESSMENT  
TOPIC - TRAINING OF BASIC CHEMISTRY SOFTWARES  
BSC VI SEMESTER - 2022

Time : 5:00 to 6:00 pm  
Max.Marks : 20M

Date : 08 - 04 - 2022

Name : Anjali  
Register No : 1953406

19  
20  
Jasmeel

Instructions: Choose and tick the correct answer

- Organic compounds are broadly classified as \_\_\_\_\_.  
 a) Open chain compounds and acyclic compounds  
 b) Open chain compounds and linear chain compounds  
 c) Cyclic compounds and alicyclic compounds  
 ✓ d) alicyclic compounds and acyclic compounds
- Aliphatic compound is the other name for \_\_\_\_\_.  
 ✓ a) Acyclic compounds  
 b) Alicyclic compounds  
 c) Ring compounds  
 d) Closed chain compounds
- Which among the following is not an example of alicyclic compound?  
 a) Cyclohexane  
 b) Cyclohexene  
 ✓ c) Tetrahydrofuran  
 ✓ d) Acetic acid
- Hydrocarbons are organic compounds with element \_\_\_\_\_.  
 ✓ a) Both hydrogen and carbon  
 b) Carbon  
 c) Hydrogen  
 d) Oxygen
- Which of the following bond is made up of a large number of organic compounds?  
 a) Metallic bond  
 b) Dipolar bond  
 ✓ c) Ionic bond  
 d) Covalent bond

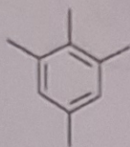


6. Which of the following organic compound with molecular formula  $C_3H_7Cl_2$  exhibits only one signal in the  $^1H$  NMR spectrum?

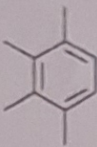
- a) 1, 2-dichloropropane
- b) 1, 1-dichloropropane
- c) 2, 2-dichloropropane
- d) 1, 3-dichloropropane

7. Which of the following is an organic compound having the molecular formula  $C_{10}H_{14}$  exhibited two singlets in the  $^1H$  NMR spectrum and three signals in the  $^{13}C$  NMR?

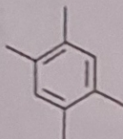
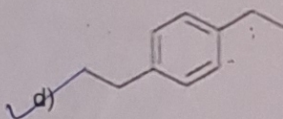
a)



b)



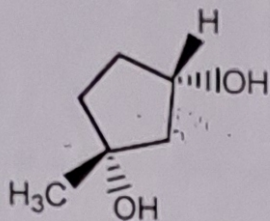
c)



8. An organic compound (MF;  $C_8H_{10}O$ ) exhibited the following  $^1H$  NMR spectral data: 6.2.5 (3H, s), 3.8 (3H, s), 6.8 (2H, d, J 8 Hz), 7.2 (2H, d, J 8 Hz) ppm. Which of the following is that compound among the choices?

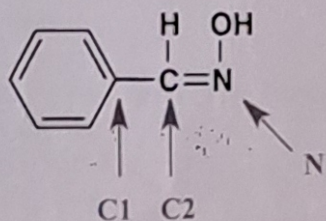
- a) 4-methylbenzyl alcohol
- b) 4-methyl anisole
- c) 4-ethylphenol
- d) 2-ethylphenol

9. What is the complete IUPAC name of the following substance?



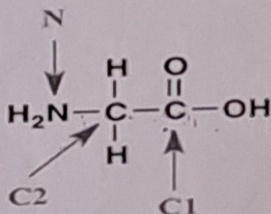
- a) (1R,3S)-1-methylcyclopentane-1,3-diol
- b) (1S,3R)-1-methylcyclopentane-1,3-diol
- c) (1S,3S)-1-methylcyclopentane-1,3-diol
- d) (1R,3R)-1-methylcyclopentane-1,3-diol

10. Which set of approximate bond angles at C1, C2, and N of the following molecule indicates the correct shape?



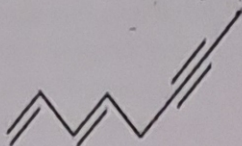
- a) C1 120°, C2 120°, N 120°
- b) C1 120°, C2 120°, N 109.5°
- c) C1 109.5°, C2 120°, N 120°
- d) C1 120°, C2 109.5°, N 109.5°

11. Which set of hybridization states of C1, C2, and N of the following molecule is correct?



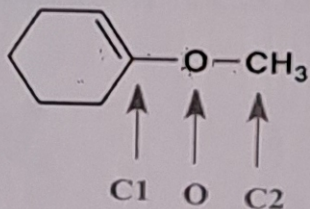
- a) C1 sp<sup>2</sup>, C2 sp<sup>3</sup>, N sp<sup>3</sup>
- b) C1 sp<sup>3</sup>, C2 sp<sup>2</sup>, N sp<sup>3</sup>
- c) C1 sp<sup>3</sup>, C2 sp<sup>2</sup>, N sp<sup>2</sup>
- d) C1 sp<sup>2</sup>, C2 sp<sup>2</sup>, N sp<sup>3</sup>

12. Which is the correct molecular formula of the following molecule?



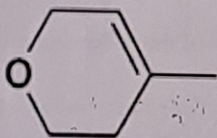
- 1
- a)  $C_8H_8$
  - b)  $C_8H_{10}$
  - c)  $C_7H_8$
  - d)  $C_7H_{10}$

13. Which set of approximate bond angles at C1, O, and C2 of the following molecule indicates the correct shape?



- 1
- a) C1 120°, O 120°, C2 120°
  - b) C1 120°, O 120°, C2 109.5°
  - c) C1 120°, O 109.5°, C2 120°
  - d) C1 120°, O 109.5°, C2 109.5°

14. Which is the correct molecular formula of the following molecule?



- 1
- a)  $C_7H_{10}O$
  - b)  $C_7H_{12}O$
  - c)  $C_6H_8O$
  - d)  $C_6H_{10}O$

15. Expand ACD in ACD Chems sketch.

- 1
- a) Advanced Chemistry development
  - b) Automatic Chems sketch drawing
  - c) Advanced Chems sketch development
  - d) Advanced Chemistry structures drawing

16. How many gm moles oxygen are there in 88 gms carbon dioxide?

- a) 1
- b) 2
- c) 3
- d) 4

1

17. What is the main application of ACD chemsketch software.

- a) Quiet easy
- b) create and modify images of chemical structures.
- c) Molecular modelling
- d) Dimensional images

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18. Which of the following is a not a five membered ring?

- a) Pyridine
- b) Pyrrole
- c) Furan
- d) Thiophene

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19. The correct bond order in the following species is \_\_\_\_\_.

- a)  $O_2^+ < O_2^- < O_2^{2+}$
- b)  $O_2^- < O_2^+ < O_2^{2+}$
- c)  $O_2^{2+} < O_2^+ < O_2^-$
- d)  $O_2^{2+} < O_2^- < O_2^+$

1

20. The bond angle around an atom which uses  $sp^2$  hybridization is \_\_\_\_\_.

- a)  $120^\circ$
- b)  $180^\circ$
- c)  $107^\circ$
- d)  $109^\circ.28'$

1

**Marks list**

Department of Chemistry				
Class: B.Sc. VI Semester				
Course title: Training of basic chemistry software's				
Faculty Name: Dr. Anjaneya Oblesha & Miss Jasmeeen				
Sl.No	Register No	Name of the Student	Marks	Signature of Student
1	1953113	Manikeshwari	18	Mk.
2	1953137	Mahesh.K.	16	MK
3	1953155	Savita.	17	Savita
4	1953172	Praveen.K	19	P
5	1953179	Laxmi	18	Laxmi
6	1953185	Meghana	18	Meghana
7	1953203	Triveni	18	Triveni
8	1953221	Abhechek.	16	Abhishek.
9	1953212	Revati	18	Revati
10	1953233	B. Vibha	19	Bibha
11	1953255	Veena	16	Veena
12	1953242	Ruthu	17	Ruthu
13	1953270	Babu	17	Babu
14	1953235	Bharat	17	Bharat
15	1953315	Rahul	18	Rahul
16	1953281	Kaveri	19	Kaveri
17	1953311	Anil	18	Anil
18	1953358	Geeta	17	Geeta
19	1953328	P. Ganesh	18	Ganesh
20	1953406	Anjali	19	Anjali
21	1953112	Lakshmana.	18	Lakshma
22	1953117	Akshata.B.	16	Akshata
23	1953126	Ankita.	16	ANKITA
24	1953131	Usha	18	Usha
25	1953134	Najuma	19	Najuma
26	1953147	Gayatri	18	Gayatri
27	1953159	Pooja.K	19	Pooja
28	1953148	Anusha	16	Anusha

*Jasmeeen*  
 Signature of Faculty

*Anjaneya*  
 Signature of HOD  
 Head, Dept. of Chemistry  
 L.V.D. College, RAICHUR.

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 Signature of Principal  
**PRINCIPAL**  
 L.V.D. College, RAICHUR-03.

# Laxmi Venkatesh Desai College, Raichur

Affiliated to Gulbarga University, Kalaburgi & Re-Accredited by NAAC with B Grade

## Marks list

18

### Department of Chemistry

Class: B.Sc. VI Semester

Course title: Training of basic chemistry software's

Faculty Name: Dr. Anjaneya Oblesha & Miss Jameen

Sl.No	Register No	Name of the Student	Marks	Signature of Student
29	1953154	Lakshmi	18	<u>Lakshmi</u>
30	1953143	Laxmi	19	<u>Laxmi</u>
31	1953150	Sangeeta	16	<u>Sangeeta</u>
32	1953177	G. Shanti	17	<u>G. Shanti</u>
33	1953181	S. Satish	18	<u>Satish</u>
34	1953188	Pavithra.	19	<u>Pavithra</u>
35	1953173	Ashwini	18	<u>Ashwini</u>

Signature of Faculty

Signature of HOD  
 Head, Dept. of Chemistry  
 L.V.D. College, RAICHUR.

Signature of Principal  
**PRINCIPAL**  
 L.V.D. College, RAICHUR-03.