

B. L. D. E Association's
S. B. Arts and K. C. P. Science College,
Vijayapur



Department of PG Studies in Chemistry

**SKILL BASED VALUE ADDED COURSE
FOR
PG STUDENTS OF CHEMISTRY
(For the Academic Year 2018-19)**

**Course Name: "Training on Principles and
Handling of Major Instruments"**

(Course Code: SBKCP/PGCHEM-01)

REPORT

SYLLABUS

Course Name: "Training on Principles and Handling of Major Instruments"

Course Code: SBKCP/PGCHEM-01

Total Duration of Teaching: 30 Hours

Course Contents:

I. OBJECTIVE

II. SCOPE

III. SYLLABUS

IV. DURATION OF THE COURSE

V. EXAMINATION PATTERN

VI. REFERENCES

I. OBJECTIVE:

The main objective is make students employees of the university and affiliated colleges to understand the basic principles and handling of some major instruments found in the chemistry laboratory. Handling of these instruments will help the students to carry out some of the important projects during their M.Sc course. It will also help the students to join industries, once they complete their M.Sc programme.

II. SCOPE:

Students, teachers and employees of the affiliated colleges and university who are interested in this course will be benefitted. The course will be initially, would be offered in the university and affiliated colleges.

III. SYLLABUS:

1. Basic principle and application of Rotary Evaporator. 5 hrs
Principle, Instrument parts and their functions-chiller, vacuum pump, condenser, water bath. Uses of the instrument for synthetic chemists and its advantages over other conventional techniques.
2. Principle and use of UV-VIS Spectrophotometer. 5 hrs
Principle, fundamentals of UV-VIS spectroscopy and instrumentation.
3. Handling of FTIR Instrument. 5 hrs
Introduction, instrumentation, identification of various functional groups-alkanes. Alkenes, aromatics, carboxylic acids, carbonyl compounds (aldehydes, ketones and esters).

4. Principle and use of Flame Photometer. 5 hrs
Theory, principle and applications of flame photometer.
5. Use of BOD and COD incubator. 5 hrs
Theory, uses and applications of the COD and BOD incubator.
6. Chromatography techniques like Thin Layer Chromatography and Column Chromatography. 5 hrs
Introduction, principles, stationary and mobile phase systems RF value calculation, techniques of development, visualization and applications. Selection of column width, length, stationary phase and mobile phase. Separation of various plant pigments and organic compounds.

PRACTICAL:

1. Separation of plant pigments and organic compounds using thin layer chromatography and column chromatography.
2. Recoding of IR spectra of some important organic compounds and assigning their characteristics peaks.
3. Recording of UV-VIS spectra of some fluorescent compounds.
4. Determination of BOD and COD of different water samples.
5. Isolation of caffeine from Tea powder.

IV. DURATION OF THE COURSE:


30 days and the course will be conducted on every Sunday.

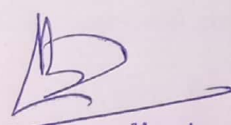
V. EXAMINATION PATTERN:

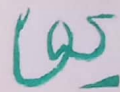
Theory	Practical		Total
Exam Marks	Exam Marks	Viva	
50	40	10	100

VI. REFERENCES:

1. Introduction to chromatography-theory and practice-V.K. Srivastava and K.k. Srivastava, S. Chand Company Ltd., IV Ed (1991).
2. Basic Concepts of analytical chemistry- S.M. Khopkar, New Age International Publishers, II Ed (1998).
3. Analytical Chromatography-G.R. Chatwal, Himalaya Publishing House, VII Ed (1998).
4. Introduction to Spectroscopy. Pavia, Lampman and Kriz, 3rd edition, Thomson.
5. Spectroscopy, B.P. Straughan and S. Walker, John Wiley & Sons Inc., New York, Vol. 1 & 2, 1976.
6. Vibration Spectroscopy Theory and Applications, D. N. Satyanarayana, New Age International, New Delhi..


Co-ordinator,
P. G. Department of Chemistry,
SB Arts & KCP Science College
BIJAPUR - 586101


IQAC, Co-ordinator
S.B.Arts & K.C.P.Science College,
Vijayapur.


Principal,
S.B.Arts & K.C.P.Science College,
Vijayapur.



**B. L. D. E. ASSOCIATION'S
S. B ARTS AND K. C. P SCIENCE COLLEGE,**

SHRI B. M. PATIL ROAD (Solapur Road), VIJAYAPUR

ACCREDITED at 'A' Grade in 3rd Cycle by NAAC

Phone: (08352) – 261766, (08352) 262770 Extn. 2223, 2224

Fax: 08352 – 261766 E-mail: bldeasbkcp@gmail.com

Web: www.bldeasbkcp.org



REF./ ಕ್ರಮಾಂಕ : _____


Date / ದಿನಾಂಕ: 01-Aug-2018

Department of PG Studies in Chemistry

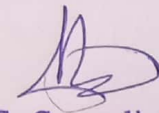
Value Added Course: 2018-2019

NOTICE

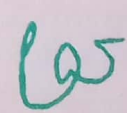
The PG Department of Chemistry is conducting value added course on "Training and handling major equipments". All the students are hereby inform to enroll your names in the PG department of chemistry before 18th of August 2018 classes will commence on 19th of August 2018.


Coordinator,

P. G. Department of Chemistry,
PG Studies in Chemistry
BIJAPUR - 586101


IQAC, Co-ordinator


S.B.Arts & K.C.P.Science College,
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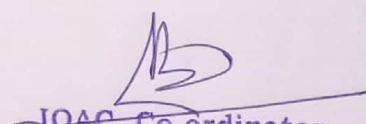

Principal

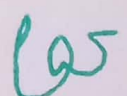
Principal,
S. B. Arts & K. C. P. Sc. College,
Vijayapur - 586103.

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S.B. Arts and K.C.P. Science College Vijayapur
P.G. Dept of Chemistry
Time Table for value added course 2018-19

Time (Theory)	SUNDAY	Remarks
10.00 to 11.00	SNU	
11.00 to 12.00	MBK	
Time (Practical)		
2.00 to 6.00	PKM	Batch-1
	SDL	Batch-2



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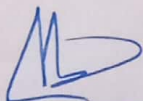

IQAC, Co-ordinator
S.B.Arts & K.C.P.Science College,
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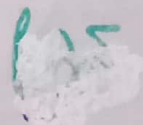

Principal,
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Vijayapur - 586103.

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S.B. Arts and K.C.P. Science College Vijayapur
P.G. Dept of Chemistry
List of Students for value added course 2018-19

Sl. No	RCU No.	Name of the Student	Signature
01	CH182001	Aishwarya Sajjan	As
02	CH182002	Akshata Marab	Am
03	CH182003	Amruta Kashetti	Am
04	CH182004	Archana Pattar	AP
05	CH182005	Bandavva Pattanashetti	Bandav
06	CH182006	Bibizahera Bevanur	BBe
07	CH182007	Daneshvani Walimarada	Dany
08	CH182008	Deepa Kamble	Dee
09	CH182009	Leela Harijan	Lhr
10	CH172001	Akshay Wadageri	Ax
11	CH172003	Basavaraj A Patil	Ba
12	CH172004	Bhavan B Kulkarni	Bb
13	CH172005	Geeta Kuntoji	Gk
14	CH172006	Geeta Tuppada	GT
15	CH172007	Hajimastan Mujawar	Hm
16	CH172008	Katyayani S Sirur	Ks
17	CH172009	Kavita Angadi	Ka
18	CH172010	Malashri S Rokadi	Ms
19	CH172012	Manjunath B Patil	MB
20	CH172013	Neha Taslim	Nt
21	CH172014	Pooja Kengal	Pk
22	CH172015	Pooja Pujari	Pp
23	CH172016	Praveenkumar Danganavar	Pd
24	CH172017	Rakshata R Yandolli	Ry
25	CH172018	Sheshidhar Mamane	Sm
26	CH172019	Shweta Pande	Sp
27	CH172020	Siddayya Pujari	Sp
28	CH172021	Sneha B Bagalkot	SB
29	CH172022	Sulegavi Jayalaxmi	Sj
30	CH172023	Vinuta Khened	Vk


Co-ordinator
P.G.Department of Chemistry
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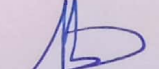

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 P.G. Dept of Chemistry
 List of Students for value added course 2018-19 (attendance)

Sl. No	RCU No.	Name of the Student	19/8/18	26/8/18	2/9/18	9/9/18	16/9/18	23/9/18	30/9/18	7/10/18	14/10/18	21/10/18	28/10/18	4/11/18	11/11/18	18/11/18	2/12/18	9/12/18	16/12/18
01	CH182001	Aishwarya Sajjan	AS	AS	AS	AS	AS	AS	AS	AS	AS	AS	AS	AS	AS	AS	AS	AS	AS
02	CH182002	Akshata Marab	Am	Am	Am	Am	Am	Am	Am	Am	Am	Am	Am	Am	Am	Am	Am	Am	Am
03	CH182003	Amruta Kashetti	AK	AK	AK	AK	AK	AK	AK	AK	AK	AK	AK	AK	AK	AK	AK	AK	AK
04	CH182004	Archana Pattar	AP	AP	AP	AP	AP	AP	AP	AP	AP	AP	AP	AP	AP	AP	AP	AP	AP
05	CH182005	Bandavva Pattanashetti	Bp	Bp	Bp	Bp	Bp	Bp	Bp	Bp	Bp	Bp	Bp	Bp	Bp	Bp	Bp	Bp	Bp
06	CH182006	Bibizahera Bevanur	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB	BB
07	CH182007	Daneshvani Walimarada	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	AB	DW	DW
08	CH182008	Deepa Kamble	Dk	Dk	Dk	Dk	Dk	Dk	Dk	Dk	Dk	Dk	Dk	Dk	Dk	Dk	Dk	Dk	Dk
09	CH182009	Leela Harijan	LH	LH	LH	LH	LH	LH	LH	LH	LH	LH	LH	LH	LH	LH	LH	LH	LH
10	CH172001	Akshay Wadageri	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW	AW
11	CH172003	Basavaraj A Patil	Bp	Bp	Bp	Bp	Bp	Bp	Bp	Bp	Bp	Bp	Bp	Bp	Bp	Bp	Bp	Bp	Bp
12	CH172004	Bhavan B Kulkarni	Bk	Bk	Bk	Bk	Bk	Bk	Bk	AB	Bk	Bk	Bk	Bk	Bk	Bk	AB	Bk	Bk
13	CH172005	Geeta Kuntoji	Gk	Gk	Gk	Gk	Gk	Gk	Gk	Gk	Gk	Gk	Gk	Gk	Gk	Gk	Gk	Gk	Gk
14	CH172006	Geeta Tuppad	Gt	Gt	Gt	Gt	Gt	Gt	Gt	Gt	Gt	Gt	Gt	Gt	Gt	Gt	Gt	Gt	Gt
15	CH172007	Hajimastan Mujawar	Hm	Hm	Hm	Hm	Hm	Hm	AB	Hm	AB	Hm	Hm	Hm	Hm	Hm	Hm	Hm	Hm
16	CH172008	Katyayani S Sirur	Ks	Ks	Ks	Ks	Ks	Ks	Ks	Ks	Ks	Ks	Ks	Ks	Ks	Ks	Ks	Ks	Ks
17	CH172009	Kavita Angadi	KA	KA	KA	KA	KA	KA	KA	KA	KA	KA	KA	KA	KA	KA	KA	KA	KA
18	CH172010	Malashri S Rokadi	MR	MR	MR	MR	MR	MR	MR	MR	MR	MR	MR	MR	MR	MR	MR	MR	MR
19	CH172012	Manjunath B Patil	Mp	Mp	Mp	Mp	Mp	Mp	Mp	Mp	Mp	Mp	Mp	Mp	Mp	Mp	AB	Mp	Mp
20	CH172013	Neha Taslim	Nt	Nt	Nt	Nt	Nt	Nt	Nt	Nt	Nt	Nt	Nt	Nt	Nt	Nt	Nt	Nt	Nt
21	CH172014	Pooja Kengal	Pk	Pk	AB	Pk	Pk	Pk	Pk	Pk	Pk	Pk	Pk	Pk	Pk	Pk	Pk	Pk	Pk
22	CH172015	Pooja Pujari	Pp	Pp	Pp	Pp	Pp	Pp	Pp	Pp	Pp	Pp	Pp	Pp	Pp	Pp	Pp	Pp	Pp
23	CH172016	Praveenkumar Danganavar	Pd	Pd	Pd	Pd	Pd	Pd	Pd	Pd	Pd	Pd	Pd	Pd	Pd	Pd	AB	Pd	Pd
24	CH172017	Rakshata R Yandolli	Ry	Ry	Ry	Ry	Ry	Ry	Ry	Ry	Ry	Ry	Ry	Ry	Ry	Ry	Ry	Ry	Ry
25	CH172018	Sheshidhar Mamane	Su	Su	Su	Su	Su	Su	Su	Su	Su	Su	Su	Su	Su	Su	Su	Su	Su
26	CH172019	Shweta Pande	Sp	Sp	Sp	Sp	Sp	Sp	Sp	Sp	Sp	Sp	Sp	Sp	Sp	Sp	Sp	Sp	Sp
27	CH172020	Siddhaya Pujari	Su	Su	Su	Su	Su	Su	Su	AB	Su	Su	Su	Su	Su	Su	Su	Su	Su
28	CH172021	Sneha B Bagalkot	Sb	Sb	Sb	Sb	Sb	Sb	Sb	Sb	AB	Sb	Sb	Sb	Sb	Sb	Sb	Sb	Sb
29	CH172022	Sulegavi Jayalaxmi	Sj	Sj	Sj	Sj	Sj	AB	Sj	Sj	AB	Sj	Sj	Sj	Sj	Sj	Sj	Sj	Sj
30	CH172023	Vinuta Khened	Vk	Vk	Vk	Vk	Vk	AB	Vk	Vk	Vk	Vk	Vk	Vk	Vk	Vk	AB	Vk	Vk


Co-ordinator
P.G. Department of Chemistry
 S.B. Arts & K.C.P. Science College
 Vijayapur-586101.


Co-ordinator
P.G. Department of Chemistry
 S.B. Arts & K.C.P. Science College,
 Vijayapur.

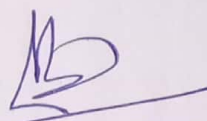

Principal,
P.G. Department of Chemistry
 S.B. Arts and K.C.P. Science College
 VIJAYAPUR

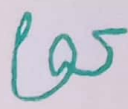
B.L.D.E. Association's
S.B. Arts and K.C.P. Science College Vijayapur
P.G. Dept of Chemistry
Notice for value added course 2018-19

NOTICE

The PG Department of Chemistry is conducting exam (Theory and Practical) for value added course "**Training on Principles and Handling of Major Instruments**" On 24 March 2019. All the students are hereby informed to attend the exam.


**Coordinator
Co-ordinator,**
P. G. Department of Chemistry,
PG Studies in Chemistry
S.B. Arts & K.C.P. Science College
BIJAPUR - 586101


IQAC, Co-ordinator
S.B. Arts & K.C.P. Science College,
Vijayapur.


Principal
Principal,
S. B. Arts & K. C. P. Sc. College,
Vijayapur - 586103.

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P.G. Dept of Chemistry

Theory Test for value added course 2018-19

Date: 24-03-2019

Time: 9.00 to 11.00

Duration: 2 hrs

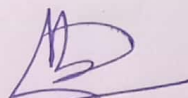
I. Answer the following questions 10×5=50 Marks

1. Discuss the basic principle and application of rotary evaporator.
2. Briefly explain the principle of FTIR.
3. Discuss the theory, uses and applications of flame photometer.
4. Discuss the principle and uses of UV-VIS spectrophotometry.
5. Write a short note on stationary phase, Mobile phase, column width and length.



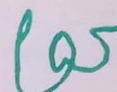
Co-ordinator,

P. G. Department of Chemistry,
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IQAC, Co-ordinator,

S.B.Arts & K.C.P.Science College, Vijayapur - 586103.



Principal,

S. B. Arts & K. C. P. Sc. College,
Vijayapur - 586103.

B.L.D.E. Association's
S.B. Arts and K.C.P. Science College Vijayapur
P.G. Dept of Chemistry

Practical Test for value added course 2018-19

Date: 24-03-2019

Time: 2.00 to 6.00

Duration: 4 hrs

1. Determine the quantity of caffeine from tea powder

40 Marks

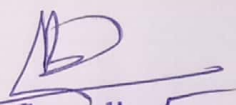
Viva: 10 Marks

Total=50 Marks



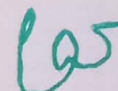
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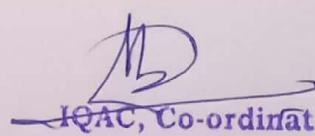
Marks list for value added course 2018-19

Maximum Marks: 100

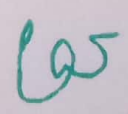
Sl. No	RCU No.	Name of the Student	Marks		
			Theory(50)	Practical(50)	Total
01	CH182001	Aishwarya Sajjan	39	41	80
02	CH182002	Akshata Marab	39	45	84
03	CH182003	Amruta Kashetti	43	42	85
04	CH182004	Archana Pattar	48	39	87
05	CH182005	Bandavva Pattanashetti	38	41	79
06	CH182006	Bibizahera Bevanur	40	45	85
07	CH182007	Daneshvani Walimarada	41	47	88
08	CH182008	Deepa Kamble	39	41	80
09	CH182009	Leela Harijan	39	45	84
10	CH172001	Akshay Wadageri	43	42	85
11	CH172003	Basavaraj A Patil	40	39	79
12	CH172004	Bhavan B Kulkarni	41	46	87
13	CH172005	Geeta Kuntoji	39	39	78
14	CH172006	Geeta Tuppada	39	42	81
15	CH172007	Hajimastan Mujawar	40	45	85
16	CH172008	Katyayani S Sirur	41	47	88
17	CH172009	Kavita Angadi	39	41	80
18	CH172010	Malashri S Rokadi	39	45	84
19	CH172012	Manjunath B Patil	43	42	85
20	CH172013	Neha Taslim	40	39	79
21	CH172014	Pooja Kengal	38	47	85
22	CH172015	Pooja Pujari	39	41	80
23	CH172016	Praveenkumar Danganavar	39	45	84
24	CH172017	Rakshata R Yandolli	43	42	85
25	CH172018	Sheshidhar Mamane	48	39	87
26	CH172019	Shweta Pande	38	41	79
27	CH172020	Siddayya Pujari	40	45	85
28	CH172021	Sneha B Bagalkot	41	42	83
29	CH172022	Sulegavi Jayalaxmi	38	47	85
30	CH172023	Vinuta Khened	39	41	80


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P.G. Dept of Chemistry
Value added course 2018-19

COURSE OUTCOME

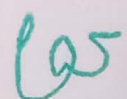
Skill based value added course on "Training on Principles and Handling of major Instruments" for PG Students of Chemistry for the Academic Year 2018-19.

In this course students were able to handle major instruments like Rotary Evaporator, UV-VIS Spectrophotometer, FTIR, Flame Photometer and they were also able to test the water by BOD and COD method.

These instruments helped to the students to carry out some of the important projects during their M.Sc course. It also helped the students to join in various industries.


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S.B.Arts & K.C.P. Science College,
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TQAC, Co-ordinator
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S.B. Arts and KCP Science College
VIJAYAPUR



B. L. D. E. Association's

S.B. ARTS & K.C.P. SCIENCE COLLEGE, VIJAYAPUR

(Re-Accredited by NAAC at 'A' Level in 3rd Cycle)

Internal Quality Assurance Cell Initiative




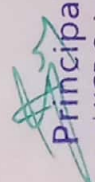
VALUE ADDED COURSE

Certificate

This is to certify that Mr./Ms. Sulegani Jayalaxmi
has Completed the Value Added Course on Training on Principles of Handling of
Major Instruments during the
Conducted by the Department of P.G. Chemistry

Year 2018-19


IQAC, Co-ordinator
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Principal,
S.B. Arts and KCP Science College,
VIJAYAPUR

Head of the Department
Vijayapur. Co-Ordinator, IQAC

Principal



B. L. D. E. Association's

S.B. ARTS & K.C.P. SCIENCE COLLEGE, VIJAYAPUR

(Re-Accredited by NACC at 'A' Level in 3rd Cycle)

Internal Quality Assurance Cell Initiative

VALUE ADDED COURSE

Certificate

This is to certify that Mr./Ms. Sneha B Bagalkot

has Completed the Value Added Course on Training on Principles of Handling of

Conducted by the Department of P.G Chemistry Major Instruments during the

Year 2018-19



IQAC, Co-ordinator

S.B.Arts & K.C.P.Science College,
Vijayapur.

Head of the Department

Co-Ordinator, IQAC



Principal,

S.B. Arts and KCP Science College
VIJAYAPUR

Principal



B. L. D. E. Association's

S.B. ARTS & K.C.P. SCIENCE COLLEGE, VIJAYAPUR

(Re-Accredited by NACC at 'A' Level in 3rd Cycle)

Internal Quality Assurance Cell Initiative



VALUE ADDED COURSE

Certificate

This is to certify that Mr./Ms. Siddayya Pujan
has Completed the Value Added Course on Training on Principle & Handling of
Conducted by the Department of PG Chemistry major instruments. during the

Year 2018-19

IQAC, Co-ordinator

S.B.Arts & K.C.P.Science College,

Vijayapur. Co-Ordinator, IQAC

Principal,

S.B. Arts and KCP Science College
VIJAYAPUR

Principal



B. L. D. E. Association's

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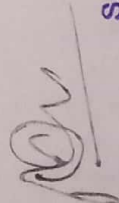


VALUE ADDED COURSE


Certificate

This is to certify that Mr./Ms. Shweta Pande
has Completed the Value Added Course on Training on Principle & Handling of
major instruments during the
Conducted by the Department of P.G. Chemistry

Year 2018-19


IQAC, Co-ordinator
S.B.Arts & K.C.P. Science College,
Vijayapur.

Head of the Department


Principal,
S.B. Arts and KCP Science College
VIJAYAPUR

Principal



B. L. D. E. Association's

S.B. ARTS & K.C.P. SCIENCE COLLEGE, VIJAYAPUR

(Re-Accredited by NACC at 'A' Level in 3rd Cycle)

Internal Quality Assurance Cell Initiative

VALUE ADDED COURSE

Certificate

This is to certify that Mr./Ms. Vinuta Khened
has Completed the Value Added Course on Training on Principles & Handling
Conducted by the Department of Major Instruments during the
Year 2018-19

Head of the Department
IQAC, Co-ordinator
S.B.Arts & K.C.P. Science College,
Vijayapur.

Principal,
S.B. Arts and KCP Science College
VIJAYAPUR
Principal

Co-Ordinator, IQAC