

1.3.2. Experiential learning through project work / filed work

A. Projects work of BCA

Year	Admission	Project	Percentage
2015-16	45	45	100%
2016-17	57	57	100%
2017-18	31	31	100%
2018-19	46	44	95.65%
2019-20	43	35	81.39%

1. Project Topics List 2015-16
2. Project Topics List 2016-17
3. Project Topics List 2017-18
4. Project Topics List 2018-19
5. Project Topics List 2019-20

Shankarlal Khandelwal Arts, Science and Commerce College, Akola

Experiential Learning

Our college runs UG programme in BCA and in this programme for Sem VI project work is there which gives first-hand experience to students and experiential learning in compute application. In this project work student carry out research on the vital aspects in computer. This project work is part of the curriculum of BCA under Sant Gadge Baba University Amravati.

6SP3: LAB III-Project work with Report.

The distribution of marks in Practical examination is given as:

(1) Project Work with Report 30 marks.

(2) Viva-Voce 20 marks.

----- 50 marks. -----



Anjali Lumarach

Report of Project Year 2015-16

Group	Sr. No	Student Name	Project Name
Group I	1	Abhilasha Gole	<i>Online Advertisement</i>
	2	Priya Gomase	
	3	Sonali Jadhao	
Group II	1	Aaditya Deshmukh	<i>Website</i>
Group III	1	Kalyani Fulambarkar	<i>Annapurna</i>
	2	Mayuri kale	
	3	Komallngle	
Group IV	1	Pavankumar karankar	<i>Ayurvedic informative Website</i>
	2	Anand vaishnav	
	3	Saurabh Deshmukh	
Group V	1	Sanket Goenka	<i>RTO automation System</i>
	2	Ronak khetan	
Group VI	1	Dheeraj channe	<i>Pizza Hut Shop</i>
	2	Shubham jadhav	
	3	Dnyanesh Gawande	
Group VII	1	Jyoti sharma	<i>Historical places in india</i>
	2	Neha sharma	
Group VIII	1	Swapnil Chobe	
	2	Sumit Awatade	<i>Shop</i>
Group IX	1	Pooja Borbale	<i>Jewellery shop</i>
	2	Damini nandanwar	
Group X	1	Sanjivani Bhagyawant	
Group XI	1	Riya dhanwani	
	2	Sanjana mehesare	<i>Blood bank system</i>
	3	Nisha thotange	

Group XII	1	Kalyani pathe	<i>Aquagel mgmt system</i>
	2	Pragati Jamode	
	3	Vaishali awale	
Group XIII	1	Akshay gadam	<i>Hostal Management system</i>
	2	Aditya bhartilak	
	3	Suraj lunge	
Group XIV	1	Renuka Sopdhare	<i>Swatchata abhiyan</i>
	2	Anuja Deshamukh	
Group XV	1	Tushar sattivale	<i>Tyre mgmt system</i>
	2	Vaibha Kothmire	
Group XVI	1	Darshana banait	<i>Desktop Application</i>
	2	Rasika mahurkar	
Group XVII	1	Priyanka kothalkar	<i>Desktop Application</i>
	2	Rachana solanke	
Group XVII	1	Pranav bhagwat	<i>Website</i>
	2	Shubham bodale	
	3	Anirudhha Alkari	
Group XVIII	1	RadhikaWagh	<i>India hill tour</i>
	2	Krutika ingle	
	3	Poojasonwane	

Teach by:

- Anjali Kumavat
- Shikha Bisen
- Smita Hushe

BCA

Project List 2016-17

Groups	Sr No	Students Name	Project Name	Guide
I	1	Abhishek Shashikant Wankhade	Hotel Reservation System	Gawande mam
	2	Akshay Dilip Murhe		
	3	Amol Balkrishna Khedkar		
II	1	Ankush Pralhad Bawane	Jewellery management system	Jagruti Raut
	2	Bhushan Babulal Navthale		
	3	Hemantkumar Rangrao Tota		
III	1	Shivam Rameshehandra Attal	Enquiry form script	Smita Dhanokar
	2	Shivam Rameshehandra Attal		
	3	Shubham Sanjay Tekade		
IV	1	VISHAL DINKAR BARKE	Stores Management System	Smita Dhanokar
	2	Abhishek Dilip Kulkarni		
	3	Akshy Pramod Awchar		
V	1	Ankit Radheshyam Rathi	Classroom Management Software	Gawande mam
	2	Chetan Ramesh Giri		
	3	Harsh Shailendra Ingale		
VI	1	Harshal uddhaorao Khande	Online Courier Management System	Jagruti Raut
	2	Kamlesh Gajanan Dethe		
	3	Kapil Gajanan Murumkar		
VII	1	Kaustubh Vijay Deshmukh	Gas Agency Management System	Smita Dhanokar
	2	Mayur Shivaji Patil		
VIII	1	Niraj Suresh Bhakare	Online Job Site Report	Jagruti Raut
	2	Pawan Sanjay Agarkar		
	3	Pawan Shyam Naidu		
IX	1	Ravi Vijay Girhe	Online Examination System Project	Jagruti Raut
	2	Rushikesh Ramdas Patil		
	3	Rushikesh Sanjivkumar Ennewar		
X	1	Sachin Anil Raut	Social Networking project synopsis	Gawande mam
	2	Sopan Dnyaneshwar Bihade		
XI	1	Sooraj Rajendra Khupse	ONLINE NEWS SYSTEM	Jagruti Raut
	2	Vivek Pramod Warulkar		

XII	1	Aishwarya Sanjiv Nerkar	COLLEGE MANAGEMENT SYSTEM	Smita Dhanokar
	2	Ankita Ravindra Dongre		
	3	Apurva Jayant Kulkarni		
XIII	1	Ashwini Ishwardas Pohare	EMPLOYEE PAYROLL SYSTEM	Jagruti Raut
	2	Bhumika Vilas Ahir		
	3	Chaitali Sharad Dikholkar		
XIV	1	Dipali Vilas Dande	ONLINE AIR TICKET RESERV ATION SYSTEM	Smita Dhanokar
	2	Kalyani Jayant Joshi		
	3	Komal Datta Dipke		
XV	1	Madhuri Ravindra Tayade	ONLINE WEB BUILDER	Jagruti Raut
	2	Megha Dinkar Ingle		
	3	Megha Radhesham Chitlange		
XVI	1	Nikila Vivek Yadgire	E- SHOPPING	Gawande mam
	2	Payal Narayanrao Waghade		
	3	Pooja Bhujangrao sirsat		
XVII	1	Priyanka Ajabrao Sable	SHOE SHOP MANAGEMENT	Gawande mam
	2	Rani Baliram Gadge		
	3	Rutuja Vijay Pachkawade		
XVIII	1	Vaishnavi Kailas Nandurkar	OFFICE AUTOMATION SYSTEM	Smita Dhanokar
	2	Anjali Suresh Nagapure		
	3	Harsha Saranghdhar Dakhode		
XIX	1	Pooja Gajanan Ugwekar	ONLINE VECHILE SHOWROOM	Gawande mam
	2	Pooja Vijay Rakhonde		
	3	Reena Anil Mahore		
XX	1	Sayali Umakant Kavhade	Human Resource Management System	Jagruti Raut
	2	Vrushali Bhumikishor Shankarpure		

Total (56)

1) Smita Dhanokar
 2) Jagruti Raut
 3) Gawande

(Handwritten signatures and marks)

Report of Project

Year 2017-18

In academic session of year 2017-18 we teach to BCA III rd year students. In final sem of the BCA they have project in there syllabus, For project completion we have taken lots of effort with students we guide them on regular basis for project development by themselves only. Students perform their role in very effective manner and they develop complete project by their own by following all the rules and regulation. They develop this project in latest technology trends or those languages are recently using by IT industry in that language they will smartly develop their project.

Group	Sr. No	Student Name	Project Name	Guide Name
Group I	1	Abhay Bhimrao Wankhade	<i>Online Complaint System</i>	Vidur Sharma Sir
	2	Prashant Ananda Jamnik		
	3	Praful Arun Band		
Group II	1	Aditi Dnyaneshwar Dethe	<i>Time Table Generation System</i>	Kumavat Mam
	2	Shruti Ravindra Kakade		
	3	Komal Arvind Tayade		
Group III	1	Darshan Tejroa Bihade	<i>Bus Ticket Booking System</i>	Rahul Tale Sir
	2	PAVAN SANJAY WAGHMARE		
Group IV	1	Kishori Pralhad Bodkhe	<i>Online Learning Sytem</i>	Rahul Tale Sir
	2	Nikita Raju Khande		
	3	Sonam J.Sawlani		
Group V	1	Mahesh Baburao Chambhare	<i>Pocket Car</i>	Vidur Sharma Sir
	2	Umesh Ganesh Chondekar		

Group VI	1	Mansi Mehulkumar Unadkat	<i>Perfect Home</i>	Rahul Tale Sir
	2	Vaishnavi Shirish Kulkarni		
Group VII	1	Mohini Haribhau Halwane	<i>Search and start</i>	Vidur Sharma Sir
	2	Shraddha Sanjay Sharma		
Group VIII	1	Monika Rajendra Tiwari	<i>Job Portal</i>	Kumavat Mam
	2	Priyanka Jayant Kukade		
	3	Pooja Mohan Rathod		
Group IX	1	Nikhil Suresh Rakhonde	<i>E-noticeboard</i>	Kumavat Mam
	2	Shubham Ramdas Gawande		
Group X	1	Prasad Kiran Pande	<i>Online Automobile Service center</i>	Vidur Sharma Sir
	2	Rohit Jagdish Sharma		
Group XI	1	Sukeshanee Ganeshrao Wankhade	<i>Online Voting System</i>	Kumavat Mam
	2	Vaishnavi Gajanan Bhalerao	<i>E-Learning</i>	
Group XII	1	Vaishali Ratan Khaire		Kumavat Mam
	2	Harshita Panjabrao Deshmukh		
Group XIII	1	Yogesh Onkar Dethe	<i>Shop</i>	Vidur Sharma Sir
	2	Pratik Ram Deshpande		
	3	Bhushan Kharode		

1] Vidur Sharma *R Sharma*

2] Rahul Tale *R Tale*

3] Anjali Kumavat *A Kumavat*

Total (31)

Project list

Year 2018-19

Group	Sr. No	Student Name	Project Name	Guide Name
Group I	1	Abhishek Chandrakant Gawai	Bank maagement system	Vidur Sharma Sir
	2	Aditya Sudhakar Deshmukh		
	3	Akash Ravindra Patil		
Group II	1	Akash Suresh Sable	calender Application	Kumavat Mam
	2	Aniket Gajanan Jagdale		
	3	Anil Pralhad Nagulkar		
Group III	1	Asmita Shankar Bondre	Customer billing System	Rasika mam
	2	Bharti Narayanrao Kharbadkar		
	3	Kendre Rupali Vasanttrao		
Group IV	1	Chetan Raju Khandare	Employee record System	Rasika mam
	2	Dip Sadanand Dongare		
	3	Kartik Nagnath Pastapure		
Group V	1	Dipali Sunil Dalvi	Cyber management System	Vidur Sharma Sir
	2	Gauri Sunil Sawai		
	3	Shital Sanjay Ghatole		
Group VI	1	Khushal Prafull Rathi	School billing System	Rasika mam
	2	Lokesh Kishor Bradiya		
	3	Sajan Vinayak Wankhade		
Group VII	1	Komal Sanjay Shegokar	Hospital Management System	Vidur Sharma Sir
	2	Madhuri Dnyaneshwar Bhagat		
	3	Sayali Dipak Bhakare		
Group VIII	1	Mandeep Sukhdev Wadekar	Student record System	Kumavat Mam
	2	Mayur Narendra Sable		
	3	Nitin Rameshwar Mahokar		
Group IX	1	Mugdha Nitin Deshmukh	medical store management System	Kumavat Mam
	2	Pooja Ashish Yadav		
	3	Snehal Chandramani Shegaonkar		
Group X	1	Pooja Vishnu Randhe	university management system	Vidur Sharma Sir
	2	Pranali Ajayrao Vighe		
	3	Sayali Gajendra Ingle		

Group XI	1	Pravin Gangaram Jadhao	traffic controll	Kumavat Mam
	2	Rahul Mohan Mhaisane	management system	
	3	Saurabh Vishwambhar Dharamkar		
Group XII	1	Rachita Rajesh Khedkar	search engine	Kumavat Mam
	2	Rajeshwaree Prakash Komalkar		
Group XIII	1	Rekha Girish Deshpande	Cricket Score system	Vidur Sharma Sir
	2	Revati Rajkumar Rathod		
	3	Roshani Shyam Sharma		
Group XIV	1	Shivam Shamrao Kalaskar	Phonebook application	Kumavat Mam
	2	Shrikant Vilas Belurkar		
	3	Shubham Chandrakant Agrawal		
Group XV	1	Shubham Pralhad Nawghare	Quize game	Rasika mam
	2	Tushar Vikas Dhande		
Group XVI	1	Uday Satish Fartade	Bike race game	Vidur Sharma Sir

Note: - Allotted Project Topics and Project Guide will not be change on any Circumstances.

Total (44)

1. Mr. Vidur Sharma *Vidur*
2. Miss. Anjali Kumavat - *Akumavat*

PROJECT TOPICS

BCA – III (Sem VI)

Year- 2019-2020

Sr. no.	Group	Candidate Name	Project Topic	Guide Name
1)	Group – A1	i) Amey Gangakhedkar	E-Crime	Rasika Bawane
		ii) Sagar Phadnis		
2)	Group – A2	i) Umesh Nalinde	Mineral	Smita Dhanokar
		ii) (Pavan Sadar)	Water Plant	
3)	Group – A3	i) Pallavi Ghogare	Study Forum	Smita Dhanokar
4)	Group – A4	i) Pallavi Deshpande	Hostel	Rasika Bawane
		ii) Megha Kadam	Management	
		iii) Shubhangi Purandare	System	
5)	Group – B1	i) Ankita Khedkar	Farmer's	Rasika Bawane
		ii) Priya Khedkar	Buddy	
6)	Group – B2	i) Rushikesh Bawankar	Online	Smita Dhanokar
		ii) Saurabh Maske	Aptitude Test	
		iii) Shubham Rajput		
7)	Group – B3	i) Aishwarya Deshmukh	E-Library	Smita Dhanokar
		ii) Dipali Khumkar		
8)	Group – B4	i) Vishal Kharode	Dental Care	Rasika Bawane
		ii) Avinash Kalmegh	System	
		iii) Kunal Kalpande		

Rasika Bawane

9)	Group – c1	i)Aishwarya Dayma	Banking System	Chetan Waghodkar
10)	Group – c2	i)Pooja Sharma	Inventory System	Rasika Bawane
		ii)Manasi Pasari		
		iii)Sachi Tayade		
11)	Group – c3	i)Bhushan Ghule	ATM	Chetan Waghodkar
		ii)Shivam Nandane		
		iii)Mahesh Pund		
12)	Group – c4	i)Atharva Deshmukh	News Website	Chetan Waghodkar
		ii)Shailesh Sharma		
		iii)Kuldeep Gawande		
13)	Group – D1	i)Nachiket Tekade	Clean City	Smita Dhanokar
		ii)Harish Nahate		
		iii)Mahesh Wankhade		
14)	Group – D2	i)Rushikesh Warankar	Property Broker	Chetan Waghodkar
		ii)Abhishek Warankar		
		iii)Rishabh Mishra		
15)	Group – D3	i)Kalyani Deshpande	Internal Marks Assesment	Smita Dhanokar

Total = 35

**Note: - Allotted Project Topics and Project Guide will not be change on any
Circumstances.**

Smita Dhanokar

Smita



B. Projects work of M.Sc. (Chemistry)

Year	Admission	Project	Percentage
2015-16	09	09	100%
2016-17	11	11	100%
2017-18	15	14	93.33%
2018-19	19	18	94.73%
2019-20	17	17	100%

Experiential Learning

1. Project Topics and Name List 2015-16

2. Project Topics and Name List 2016-17

3. Project Topics and Name List 2017-18

4. Project Topics and Name List 2018-19

5. Project Topics and Name List 2018-19

6. Project Topics and Name List 2019-20

7. Research Guidance for P.G Dr.M.O.Malpani
2016-17, 2017-18, 2018-19

7. Research Guidance for P.G Dr.P.S.Pande
2016-17, 2017-18, 2018-19

Shankarlal Khandelwal Arts, Science and Commerce College, Akola

Experiential Learning

Our college runs PG programme in M. Sc Chemistry and in this programme project work is there for Sem IV. The project gives firsthand experience to students and experiential learning in chemistry. In this project work student carry out research on the vital aspects in chemistry such as phytochemical analysis, antioxidant activity, organic synthesis, heavy metal analysis and water analysis. The project is a part of the curriculum of M.Sc. Chemistry as per Sant Gadge Baba Amravati University Amravati syllabus for M.Sc. Chemistry.

M.Sc. (Chemistry)

Semester-IV

Practical-VIII - Project Work

Time : 9 Hrs. Per Week

Marks : 100

The Students will develop utilities such as analytical spectra, simulation programmes that will supplant laboratory exercises in their subject of specialization. For this, variety of small research project designed by the teacher based on the interest of the student and capabilities should be worked out.

**SHANKARLAL KHANDELWAL ARTS SCIENCE AND COMMERCE
COLLEGE AKOLA**

Department of Chemistry

Session: - 2016-2017


MSc II year Project supervision under Dr Vivek D Mane

Sr. No.	Name of the Students	Topic of the Project
1	Ku. Radhika Raut ✓	Synthesis and antimicrobial study of the synthesize isoxazolines
2	Abdul Fawad ✓	Synthesis of derivatives of the pyrazolines and their physicochemical investigation
3	Shikh Azim ✓	Synthesis of pyrazoline derivatives and flavone and their physicochemical study

Total - 10


Dr V D Mane

Supervisor


Dr P S Pande

Head Dept of Chemistry
Department of Chemistry
Shankarlal Khandelwal College
Akola.

Shankarlal Khandelwal Arts, Science and Commerce College Akola

Department of Chemistry

Research Projects assigned to M.Sc. Chemistry
2015-16

S.N.	Name of the student	Title of the project	Supervisor
1	Kiran Dipika Vinod Tuljapure	Study of antioxidant activities of herbal medicines	Dr. P.S.Pande
2	Mohd.Aatif Ahmed Abdul Lateef	Study of antioxidant activities of herbal medicines	Dr. P.S.Pande
3	Abdul Sajid Abdul Karim	Study of antioxidant activities of herbal medicines	Dr. P.S.Pande
4	Pratik Vidhya Narayan Kathale	Studies on phytochemical analysis	Dr. M.O.Malpani
5	Shaheed Khan Nasreen Hameed Khan	Studies on phytochemical analysis	Dr. M.O.Malpani
6	Tarique Ali Shah Rukhsana Nasreen Azmat Ali Shah	Studies on phytochemical analysis	Dr. M.O.Malpani
7	Saquib Ahmad Nuszat Mohd.Arsad	Synthesis of pyrazole and isoxazoles from chalcone	Dr. V.D. Mane
8	Mohd.Siddique Qamrunnisa Mohd.Sadique	Synthesis of pyrazole and isoxazoles from chalcone	Dr. V.D. Mane
9	Faizan Ahmad Raziya Sultana Abdul Hamid	Synthesis of pyrazole and isoxazoles from chalcone dibromide	Dr. V.D. Mane

Head, Department of Chemistry

**SHANKARLAL KHANDELWAL ARTS SCIENCE AND COMMERCE
COLLEGE AKOLA**

Department of Chemistry

Session: - 2017-2018

MSc II year Project supervision under Dr Vivek D Mane

Sr. No.	Name of the Students	Topic of the Project
1	Ku. Poonam Nirmal	Synthesis of some substituted flavones and find their antimicrobial activity and physicochemical study pH-metrically
2	Wasim Khan	Synthesis of some substituted flavones and find their antimicrobial activity and physicochemical study pH-metrically
3	Wasimmodin Nizamuddin	Phytochemical investigation of various extract of kalonji seeds and find their antioxidant activity as well as to determining antioxidant activity of honey
4	Atik Khan	Synthesis of some substituted isoxazoline from substituted chalcone and find their antimicrobial activity.
5	Tarique Khan	Phytochemical investigation of various extract of Moringa oleifera (Drumstick) pods and find their antioxidant activity.

Total (14)



Dr V D Mane

Supervisor



Dr P S Pande

Head Dept of Chemistry
Head
Department of Chemistry
Shankarlal Khandelwal College
Akola.

**SHANKARLAL KHANDELWAL ARTS SCIENCE AND COMMERCE
COLLEGE AKOLA**


Department of Chemistry


Session: - 2018-2019

MSc II year Project supervision under Dr Vivek D Mane

Sr. No.	Name of the Students	Topic of the Project
1	Ku. Rashmi Tiwari	Phytochemical screening and antioxidant activity of extracts of <i>azadirachta indica</i> plant.
2	Ku. Anuradha Chopade	Physico-Chemical Investigation And Antioxidant Activity of <i>Trigonella Foenumgraecum</i> Plant
3	Ku. Shradhha Pote	Phytochemical Investigation And Antioxidant Activity of <i>Asparagus Racemosus</i>
4	Ku. Swati Chandurkar	Phytochemical Investigation And Antioxidant Activity of <i>RICINUS CIMMUNIS LINN</i>
5	Ku. Prachi Arudkar	Qualitative and Quantitative Antioxidant Property of Herbal Medicine <i>Punarnavadi Ark And Gomutrasav</i>
6	Ku. Rupali Chitalange	Estimation of antioxidant activity of herbal medicines kanchanar ark and gomutrasav

Total - 18


Dr V D Mane
Supervisor


Dr P S Pande
Head Dept of Chemistry
Head
Department of Chemistry
Shankarlal Khandelwal College

**SHANKARLAL KHANDELWAL ARTS SCIENCE AND COMMERCE
COLLEGE AKOLA**

Department of Chemistry

Session: - 2019-2020

MSc II year Project supervision under Dr Vivek D Mane

Sr. No.	Name of the Students	Topic of the Project
1	Sagar Kokate	Heavy metals analysis and antioxidant property present in water hyacinth of Morna river in Akola city.
2	Shetal Ingale	Determination of heavy metals contamination in some vegetable sample from the market of akola, Maharashtra.
3	Pooja Alot	Preparation of natural hair oil form natural ingredients
4	Warsha Sabale	Analysis of heavy metals present in milk and milk product
5	Ashvini Tathod	Determination of heavy metals contimanation in some vegetables samples from the market of Akola , Maharashtra state


Dr V D Mane

Supervisor


Dr P S Pande

Head
Department of Chemistry
Shankarlal Khandelwal College
Akola.

Total - (5)

Shankarlal Khandelwal Arts, Science and Commerce College, Akola

Department of chemistry

RESEARCH GUIDANCE FOR P. G. DISSERTATION

Session 2016-17

BY Dr. M. O. MALPANI

Sr. No.	Name of the student	Title of the P. G. Dissertation	Year
Dr. M. O. MALPANI			
1.	Aarti Masane ✓	Detection of food adulteration in food samples collected randomly in Akola region	2016-17
2. ✓	Mohammed Shakeel ✓ Mohammed Jameel	Extraction, isolation and in vitro antioxidant activity <i>Adhatoda vasica</i> leaves.	2016-17
3.	Syed Shahebaz Syed ✓ Mobin	Extraction, Isolation and In Vitro Antioxidant Activity of <i>Butea monosperma</i> Leaves	2016-17



Dr. P. S. Pande

Head Department of Chemistry
Department of Chemistry
Shankarlal Khandelwal College
Akola.



Dr. M. O. Malpani

Guide for P. G. Dissertation

Shankarlal Khandelwal Arts, Science and Commerce College, Akola

Department of chemistry

RESEARCH GUIDANCE FOR P. G. DISSERTATION: 2017-18

BY Dr. M. O. MALPANI

Sr. No.	Name of the student	Title of the P. G. Dissertation	Year
Dr. M. O. MALPANI			
1.	Mohammed Sohel ✓ Mohammed Mustafa	Detection of food adulteration in milk and milk products collected randomly in Akola region	2017-18
2.	Ku Bhagyashri R ✓ Bagde	Physico-chemical analysis of water taken randomly from Akola region	2017-18
3.	Sharique Ahmed Gulam Sabir	Detection of food adulteration in pulses and spices collected randomly in Akola region	2017-18
4.	Syed Shahejad	Physico-chemical analysis of water taken randomly from Akola region	2017-18
5.	Harshal Rakhonde ✓	Detection of food adulteration in pulses and spices collected randomly in Akola region	2017-18



Dr. P. S. Pande

Head Department of Chemistry
Department of Chemistry
Shankarlal Khandelwal College
Akola.



Dr. M. O. Malpani

Guide for P. G. Dissertation

Shankarlal Khandelwal Arts, Science and Commerce College, Akola

Department of chemistry

RESEARCH GUIDANCE FOR P. G. DISSERTATION . 2018-19

BY Dr. M. O. MALPANI

Sr. No.	Name of the student	Title of the P. G. Dissertation	Year
1.	Kishor V. Chinchole	Phytochemical screening and antioxidant activity of extracts of <i>Xanthium strumarium</i> , <i>Chrysanthemum</i> and mixture of <i>Xanthium strumarium</i> and <i>Chrysanthemum</i> plant extracts	2018-19
2.	Pravin Mahalle	Phytochemical screening and antioxidant activity of extracts of <i>Achyranthes aspera</i> , <i>Amaranthus retroflexus</i> and mixture of <i>Achyranthes aspera</i> and <i>Amaranthus retroflexus</i> plant	2018-19
3.	Shraddha S. Kapse	Phytochemical screening and antioxidant activity of extracts of <i>Ricinus communis</i> , <i>Carica papaya</i> plant and mixture of <i>Ricinus communis</i> and <i>Carica papaya</i>	2018-19
4.	Radhika Rothe	Phyico-chemical investigation and antioxidant activity of <i>Asperagus racemosus</i> and <i>Barbadensis miller</i> and mixture of <i>Asperagus racemosus</i> and <i>Barbadensis miller</i>	2018-19
5.	Durga P. Damdhar	Extraction and antioxidant activity of extracts of <i>Artemisia pallen</i> (davana) plant	2018-19
6.	Kavita S. Ambarkar	Screening and comparison of antioxidant activity of different types of milk (cow, buffalo, goat and donkey)	2018-19



Dr. P. S. Pande

Head Department of Chemistry
Department of Chemistry
Shankarlal Khandelwal College
Akola.



Dr. M. O. Malpani

Guide for P. G. Dissertation

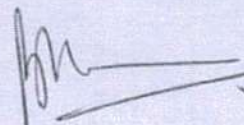
Shankarlal Khandelwal Arts, Science and Commerce College, Akola

Department of chemistry

RESEARCH GUIDANCE FOR P. G. DISSERTATION , 2016-17

BY Dr. P. S. Pande

Sr. No.	Name of the student	Title of the P. G. Dissertation	Year
1.	Mr. Nilesh S. Patil ✓	Evaluation of Antioxidant Activity of Chopchini Ark	2016-17
2.	Miss. Mayuri Ghodke ✓	Evaluation of Antioxidant Activity of MedoharArk	2016-17
3.	Miss. Aarti Patokar ✓	Estimation of Antioxidant Activity of Esab Lep Wati	2016-17
4. ✗	Mohd. Sohel Ansari ✗	Evaluation of Antioxidant Activity of Shivtrahar Lep	2016-17
5.	Miss. Ashwini Chincolkar ✓	Evaluation of Antioxidant Activity of Some Aurvedic Medicines	2016-17



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Head Department of Chemistry



Head
Department of Chemistry
Shankarlal Khandelwal College
Akola.

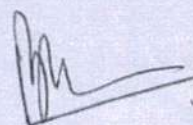
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Department of chemistry

RESEARCH GUIDANCE FOR P. G. DISSERTATION, 2017-18

BY Dr. P. S. Pande

Sr. No.	Name of the student	Title of the P. G. Dissertation	Year
1.	Mr. Pravin Ubale	Estimation of antioxidant activity of some herbal medicines	2017-18
2.	Afaque Adil Ashfaque	Evaluation of antioxidant activity of some herbal medicines	2017-18
3.	Mr. Ganesh Kharat ✓	Study of antioxidant activity of some herbal medicines	2017-18
4.	Miss Rasika A Pande	Estimation of antioxidant activity of herbal medicines Madhu Vati and Punarnavadi Vati	2017-18



Dr. P. S. Pande

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Head
Department of Chemistry
Shankarlal Khandelwal College
Akola.

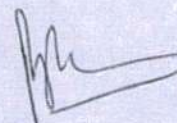
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Department of chemistry

RESEARCH GUIDANCE FOR P. G. DISSERTATION , 2018-19

BY Dr. P. S. Pande

Sr. No.	Name of the student	Title of the P. G. Dissertation	Year
1.	Miss Pooja D. Changle	Evaluation of Antioxidant Activity of Three Different Solvent Extracts of Curcuma Longa	2018-19
2.	Miss. Chaitali S. Rathod	Evaluation of Antioxidant Activity of Three Different Solvent Extracts of Carum Carvi	2018-19
3.	Miss Farhat Shadab Khan	Evaluation of Antioxidant Activity of Three Different Solvent Extracts of Black Pepper	2018-19
4.	Miss Shaikh Ameer Shaikh Wazeer	Evaluation of Antioxidant Activity of Three Different Solvent Extracts of Trachyspernum Ammi	2018-19
5.	Miss. Rutuja M Kharode	Evaluation of Antioxidant Activity of Three Different Solvent Extracts of Trachyspermum Ammi	2018-19
6.	Miss. Kalyani S. Deshmukh	Evaluation of Antioxi-dant Activity of Three Different Solvent Extracts of Syzygium Aromaticum.	2018-19



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Department of chemistry

RESEARCH GUIDANCE FOR P. G. DISSERTATION: 2019-20

Dr. P.S. Pande

Sr. No.	Name of the student	Title of the P. G. Dissertation	Year
1.	Rutuja Khedkar	Estimation of Antioxidant activity of medicinal plant Abrus precatorius	2019-20
2.	Srihari Dhok	Cymbopogon Martinii: good source of antioxidant activity	2019-20
3.	Bharti Lasurkar	Antioxidant activity of leaf extract of Glycyrrhiza Glabra	2019-20
4.	Ankita Atkurwar	Antioxidant activity of leaf extract of Hemidesmus indicus	2019-20
5.	Sharmin Pathan	Andrographis paniulata : A good source of antioxidant activity	2019-20
6.	Sonal Gavankar	Antioxidant activity of leaf extract of Iphigenia stalluta	2019-20



Dr. P. S. Pande

Supervisor

and Head Department of Chemistry

Head

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Shankarlal Khandelwal Arts, Science and Commerce College, Akola

Department of chemistry

RESEARCH GUIDANCE FOR P. G. DISSERTATION: 2019-20

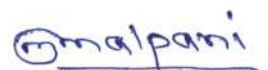
BY Dr. M. O. MALPANI

Sr. No.	Name of the student	Title of the P. G. Dissertation	Year
1.	Rohini Karode	Analysis of heavy metals in <i>Coriander</i> leaves locally collected from Akola region	2019-20
2.	Sadanand Pargharmor	Analysis of heavy metals from <i>Fenugreek</i> samples collected Locally from Akola region.	2019-20
3.	Ashvini Khumkar	Extraction and isolation of Flavonoids from the leaves of <i>Tagetes patula</i> plant.	2019-20
4.	Reshma Phate	Extraction, isolation and antioxidant activity of flavonoids from the leaves of <i>Carica papaya</i> plant	2019-20
5.	Kanchan Chandangole	Extraction, isolation and antioxidant activity of flavonoids from the leaves of <i>Hibiscus rosasinensis</i> plant	2019-20
6.	Pranita Patil	Analysis of heavy metals in <i>Spinach</i> locally collected from Akola region.	2019-20



Dr. P. S. Pande

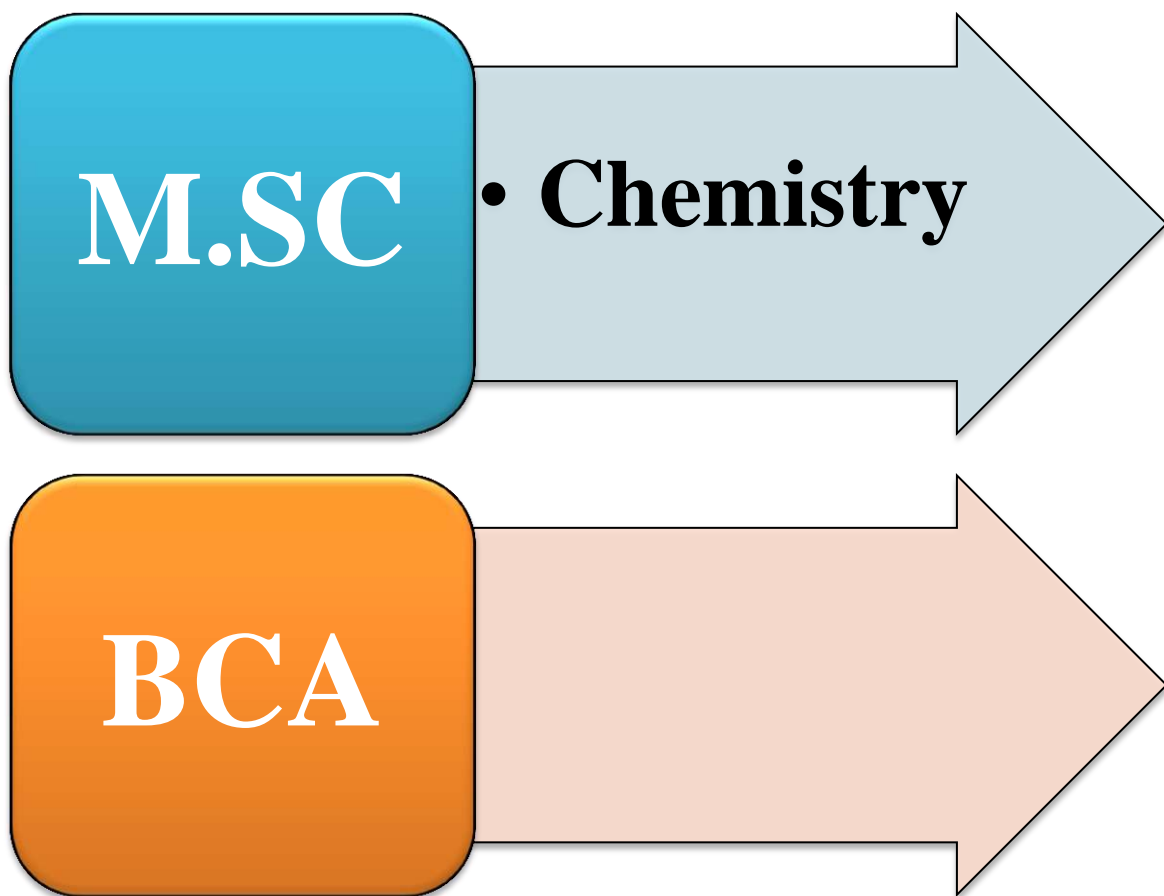
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Department of Chemistry
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Dr. M. O. Malpani

Guide for P. G. Dissertation

Syllabus of Courses with Experiential Learning



M.Sc.
Sem-I to IV(Chemistry)

Prospectus No. 2015125

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विज्ञान विद्याशाखा
(FACULTY OF SCIENCE)

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सत्र-१ ते सत्र -४

PROSPECTUS
OF
MASTER OF SCIENCE EXAMINATION
IN
CHEMISTRY
Semester -I & III, Winter 2014,
Semester -II & IV, Summer 2015,



2014

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- 3) McCabe and Smith, Unit operations of Chemical Engineering, McGraw Hill.
- 4) Budger and Banchemo, Introduction to Chemical Engineering McGraw Hill. McGraw Hill.
- 5) Text Book of Industrial Chemistry Pragti Agencies Pune 2
- 6) Engineering Chemistry By Dr. S. S. Dara.
- 7) Catalysis in theory and practices, Ridder E. K. and Taylor H. S.
- 8) Phase transfer catalysis, Principles and techniques, Starles C.
- 9) Surface Chemistry by J. J. Bikermann, Academic Press.
- 10) Physical Chemistry of Surfaces, A. W. Aclamson.
- 11) Material science, O. P. Khanna, Khanna Publishers, Delhi

Semester III

Paper XII

Sp. Paper-II

Industrial Chemistry (Processes Economics And Industrial Management)

60hrs (4hrs/week). 12hrs/unit

50 Marks

- Unit-I : Manufacture of Heavy Chemicals 12L**
 Chemical processes for the manufacture of Heavy chemicals like- soda ash, bicarbonates, chlorine, caustic soda, bleaching power, calcium carbides and acids like H_2SO_4 , HCl, HNO_3 , H_3PO_4 .
- Unit-II : 12L**
 A) Industrial Gases: Heavy chemicals and production of gases. Chemistry, manufacture, storage, hazards & uses.- Hydrogen, Oxygen, nitrogen, carbon dioxide, chlorine, fluorine, SO_2 , phosgene, acetylene, argon, neon & helium.
 B) Fertilizers: Fertilizer industries in India, Manufacture of Ammonium salts, Urea, nitrates, Ammonia, Nitrogenous fertilizers, phosphatic fertilizers, superphosphates, complex fertilizers, nitrogen fixation.
- Unit-III: 12L**
 A) Cement: Types of cement, manufacture- processes, and setting of cements.
 B) Glass: Types, their composition & properties, manufacture of glass fitness, optical glass, coloured glasses, lead glass and neutron absorbing glass.
 C) Ceramics: Introduction, types, manufacturing process, applications & refractories.
- Unit-IV : Chemical Process Economics 12L**
 Factors involved in project cost, estimation methods employed for the estimation of capital investment.

Methods of determining depreciation.
 Competitive & monopoly markets, some aspects of marketing profitability criterion.
 Economics of selecting alternatives.
 Break even point, production scheduling

Unit-V: A) Industrial Management 12L

Concept of scientific management in industry.
 Functions of management : Decision making, planning, organizing, Material management, Inventory control, Information system & decision making.

B) Safety :

General occupational safety, flammable materials, Handling, fuel fighting equipments, control measures for Toxic chemicals. Safety with chemical engineering operations, hazardous chemicals process. Safety in Laboratories and pilot plant. Safety in transportation & storage of chemicals, management of safety & loss prevention.

List of Books-

1. Charles E. Dryden, Outline of Chemical Technology Edited by M. Gopal Rao and Marshall Siting, East West Press 2nd Edition 1973.
2. Manual of Chemical Technology VOL I & II by Venkatesharul Educational Development Center. IIT Madras, 1977.
3. Chemical Process Industries by R. N. Shreve and M. J. A. Brink. McGraw Hill Ltd. 4th Edition 1977.
4. Economics of chemical industry, Hempel E. M.
5. Industrial organization and management, Bethal L. L.

Semester III

Paper XI

Analytical Chemistry
 (Advance Separation Techniques)

Total Lectures: 60Hrs, 4Hrsper week, 12Hrs/unit Total Marks-80

Unit-I : 12L

Separation Methods: Filtration, precipitation, distillation, molecular sieve, dialysis, Reverse osmosis, Ring oven methods, relative merit & demerit. Purification Techniques (Solid organic compounds, liquids etc.) Criteria of purity. Theory of chromatography, Classification, principles of chromatography, Van Deemeters Equation, Plate theory, significance of E, D_v, D_w . Techniques of

chromatographic separation gradient, isocratic, selective specific separation, types of chromatographic methods

Unit-II : **12L**

Gas Chromatography:-

Introduction to different types of gas chromatography, How does it differ from liquid chromatography. Principles of gas chromatography, plate theory of gas chromatography, Instrumentation for gas chromatography, working gas chromatography, application of gas chromatography, programmed temperature chromatography, flow programming chromatography, gas-solid chromatography, Columns for Gas Chromatography, choice of columns, polarity indices, Gas chromatography and Chirality.

Ion chromatography - Principle, structure and characteristics of resins, eluent, suppressor columns and detectors used in ion chromatography, analytical applications, environmental speciation by ion chromatography and applications. Hyphenated techniques in Chromatography.

Unit-III : **12L**

Gel Filtration:-

Introduction, types of gels, techniques used in equilibrium studies, estimating size parameters, molecular wt. determinations separating plant aspects.

Electrophoresis-Theory and classification, factors affecting mobility, macromolecular size and charge interactions with supporting electrolyte, pH and concentration discontinuities, Factors affecting electrophoresis phenomena-electrolysis, electrosomosis, temperature and supporting media. Instrumentation, methodology, Preparation of gel staining and destaining, preparative zone electrophoresis, continuous electrophoresis and Applications.

Capillary Electrophoresis-Principle, theory, instrumentation, sample preparation and applications, Capillary electrochromatography and Miscellar electrokinetic capillary chromatography

Unit-IV : **12L**

Membrane-Based Methods:-Dialysis-working of techniques, membranes, general consideration of diffusion, Donnan Membrane equilibrium and Applications.

Electrodialysis- working of techniques, membranes, Electrodialysis cells and Applications.

Ultrafiltration- working of techniques, membranes, non-gelatinous membranes and Applications. Dialysis compared with other membrane-separation methods.

Other Separation Methods:-Ultracentrifugation-Principle, sedimentation constant, sedimentation equilibrium, sedimentation velocity, methodology and applications.

Zone refining- Principle, zone leveling and applications

Unit-V : **12L**

Kinetic Methods of analysis-

Theoretical basis of kinetic methods of analysis, Rates of chemical reactions, rate laws, first order, second order kinetics, pseudo first order and second order reactions, factors affecting rate of reaction, methods of determining amount of the substance (tangent method) fix time and concentration method, addition method, oxidation reactions of H_2O_2 (thiosulphate, iodide, unimol), enzyme catalyzed reaction, inhibition and activation. Types of kinetic methods, differential and integral, applications.

Books Suggested :

1. Basic Concept in Analytical chemistry, by S.M. Khopkar.
2. Day & Underwood: Quantitative Analysis.
3. A. I. Vogel A Text book of Quantitative inorganic Chemistry, ELBS, London.
4. Analytical Chemistry, D.C. Das, PHI Learning Pvt. Ltd, New Delhi
5. Chromatography. By E Heftman, 5th edition, part-A and part-B, Elsewhere Science Publisher, 1992
6. S. Wilson & P. Jones: Chemical Analysis Vol I
7. Chromatography Today. By C F Poole and S K Poole, Elsewhere Science Publisher, 1991.
8. H.H. Willard, L.L. Merritt and J.A. Dean: Instrumental Methods of Analysis (Van Nostrand).
9. B. L. Krayner, H. H. Willard. L. Merritt, J. A. Dean & F. A. Settle: Instrumental Methods of Analysis (CBS Publishers, Delhi, 1986)
10. Analytical Chemistry. By G D Christian 4th edition, John Wiley and Sons, 1986. L. R. Snyder & C. H. Harvath: An Introduction to Separation Science (Wiley Interscience)
12. F. J. Wicher Robert: Standard Methods Chemical Analysis.
13. G. L. Davis Krupadanam, D. Vijaya Prasad, K. Varaprasad Rao, KLN Reddy, C. Sudhakar, Analytical chemistry.
14. R. D. Budhiraja Separation Chemistry, New Age.
15. R.L. Peesok and L.D. Shield: Modern Methods of Chemical Analysis.

B.C.A..Part-I,II & III
(Sem-I to VI)

Prospectus No. 20131221

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Choices in tuning queries and views, DBMS Benchmarking, Security.

Unit-II : Concurrency control transactions and schedule, Serializability, Lock based concurrency control lock management, specialized locking techniques, control without locking.

Crash Recovery, Introduction to crash recovery, Log, Check pointing, Recovery from a system crash.

Unit-III : Parallel and distributed databases. Architectures for parallel databases, Parallel query Evaluation and optimization, Parallelizing individual operations, Introduction to distributed databases, Architecture, Fragmentation and Replication, Catalog management, Distributed Query processing, updating distributed data, Distributed transaction management, Distributed Concurrency control, Distributed recovery.

Unit-IV : **Object database Systems** : Objects, Identity, inheritance, Database Design for an ORDBMS, Storage and access methods, Query processing and optimization, Comparing RDBMS with OODBMS and ORDBMS.

Unit-V : **Data Warehousing**
Introduction, DSS and OLTP, Metadata Management in Data Warehouse. Related data structures, OLAP and Data Warehousing environment.
Data mining.
Introduction and application areas.

Books :

- 1) Database Management System -Raghu Ramkrishna McGraw Hill. International Editions.
- 2) Introduction to Database System by C.G.Date.

6SP1: LAB I-6ST1+6ST2: Minimum 8 practical on each.

The distribution of marks in Practical examination is given as:

(1) Program writing/ execution based on 6ST1	15 marks.
(2) Program writing/ execution based on 6ST2	15 marks.
(3) Practical Record	10 marks.
(4) Viva-Voce	10 marks.

50 marks.

6SP2: LAB II-6ST3+6ST4: Minimum 8 practical on each.

The distribution of marks in Practical examination is given as:

(1) Program writing/ execution based on 6ST3	15 marks.
(2) Program writing/ execution based on 6ST4	15 marks.
(3) Practical Record	10 marks.
(4) Viva-Voce	10 marks.

50 marks.

6SP3: LAB III-Project work with Report.

The distribution of marks in Practical examination is given as:

(1) Project Work with Report	30 marks.
(2) Viva-Voce	20 marks.

50 marks.
