SHIKSHAN MANDAL BHAGUR'S,
AFFILIATED TO SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE,



Shri. Eknathrao sahadu shete Arts, Commerce & Science senior College, Deolali Camp, Nashik

Matoshree Yamunabai Karandikar Shaikshanik Sankul, Sv.No.306/1A/4B/2, Barnes School Road, Deolali Camp, Tal & Dist Nashik-422401.

E-mail: smbcollege2019@gmail.com

COLLEGE ID: PU/AN/ACS/181/2019

Ph.No.0253-4032579



CRITERION 2
TEACHING LEARNING AND EVALUATION

2.6 Student Performance and Learning Outcomes

Co-Ordinator

Shri Eknathrao Sahadu Shete Arts, Comm. & Sci.Senior College Deolali Camp, Nashik Deolali Camp Nashik 422401

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DECLARATION

This is to declare that the information, reports, true copies of the supporting documents, numerical data etc. submitted/presented in the files is verified by Internal Quality Assurance Cell (IQAC) and it is correct as per the record.

This declaration is for the purpose of NAAC accreditation of HEI for the 1st cycle period 2019-20 to 2023-24.

Date: /01/2024

Place: Deolali Camp

Co-Ordinator

Shri Eknathrao Sahadu Shete Arts, Comm. & Sci.Senior College Deolali Camp, Nashik Principal





Shri. Eknathrao sahadu shete Arts, Commerce & Science senior College, Deolali Camp, Nashik

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- 1) Program Outcome
- 2) Course Outcome

Co-Ordinator

IQAC Shri Eknathrao Sahadu Shete Arts, Comm. & Sci.Senior College Deolali Camp, Nashik

Camp Nashik 422401

Shri Eknathrao Sahadu Shete Art's Comm. & Sci. Senior College,

Deolali Camp, Nashik

मराठी विभाग

Program Outcomes

- 1. मराठी भाषा, मराठी साहित्य आणि मराठी संस्कृती यांची ओळख होईल,
- 2. साहित्य विषयक आकलन, आस्वाद आणि मूल्यमापन क्षमता विकसित होईल
- 3. मराठी भाषेची उपयोजनात्मक कौशल्ये विकसित होतील
- 4. साहित्याभ्यासातन् जीवनविषयक समज विकसित होईल
- 5. मराठी भाषेची उपयोजनात्मक कौशल्येयांचा विकास होईल
- 6. विद्यार्थ्यांना कादंबरी या साहित्यप्रकाराचे स्वरूप व संकल्पना यांचा परिचय होईल
- विद्यार्थ्यांना लितगद्य या साहित्यप्रकाराचे स्वरूप व संकल्पना यांचा परिचय होईल
- 8. विद्यार्थ्यांना मुद्रित माध्यमांसाठी लेखन कौशल्ये याविषयी ज्ञान मिळेल.
- 9. विद्यार्थ्यांना मराठी साहित्य, भाषिक कौशल्यविकास आणि शासन व्यवहार यांचे आकलन होईल.

Course Outcomes

- 1. विदयार्थ्यांना कथा या साहित्यप्रकाराचे स्वरूप व संकल्पना यांचा परिचय होईल .
- 2. विद्यार्थ्यांना कथा या साहित्यप्रकाराचे स्वरूप, घटक आणि प्रकार विशद करता येईल.
- विद्यार्थ्यांना विविध साहित्यप्रवामधील कथा या साहित्यप्रकारातील निवडक कथांचे अध्ययन करता येईल.
- 4. विद्यार्थ्यांना भाषिक कौशल्य विकास घडवून आणता येईल.

मराठी साहित्य एकांकिका आणि भाषिक कौशल्य विकास

- 1. विद्यार्थ्यांना एकांकिका या साहित्यप्रकाराची ओळख करून देता येईल.
- 2. विद्यार्थ्यांना एकांकिका या साहित्यप्रकाचे स्वरूप, घटक आणि प्रकार विशद करून देता येईल.

3., विद्यार्थ्यांना मराठी साहित्यातील निवडक एकांकिकांचे अध्ययन करता येईल.

4. विध्यार्थ्यांमा भाषिक कौशल्यविकास सङ्ख्याणता येईल. Co-Ordinator IQAC Shri Eknathrao Sahadu Shete

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Deolali Camp, Nashik

भाषिक कौशल्य विकास आणि आधुनिक साहित्य प्रकार कादंबरी

- 1. विद्यार्थ्यांना कादंबरी या साहित्य प्रकारचे स्वरूप, संकल्पना यांचा परिचय होईल.
- विध्यार्थ्यांना नेमलेला कादंबरीचे आकलन, आस्वाद आणि विश्लेषण करण्याची क्षमता निर्माण होईल.
- विध्यार्थ्यांना भाषिक कौशल्यविकास निर्माण होईल.

भाषिक कौशल्य विकास आणि आधुनिक साहित्य प्रकार ललित गद्य

- विद्यार्थ्यांना लिलतगद्य या साहित्य प्रकारचे स्वरूप, घटक, प्रकार आणि वाटचाल समजून घेण्याची क्षमता निर्माण होईल.
- 2. विद्यार्थ्यांमध्ये नेमलेल्या अभ्यास पुस्तकातील ललित गद्याचे आकलन, आस्वाद आणि विश्लेषण करण्याची क्षमता निर्माण होतील.
- 3. विद्यार्थ्यांमध्ये भाषिक कौशल्यविकास निर्माण होईल.

आधुनिक मराठी साहित्य - प्रकाशवाटा

- 1. विद्यार्थ्यांना या साहित्य प्रकारचे स्वरूप, संकल्पना यांचा परिचय होईल.
- विद्यार्थ्यांना आत्मचरित्र या साहित्य प्रकारच्या प्रेरणा आणि वाटचाल यांची ओळख होईल.
- 3. विद्यार्थ्यांना ललित गद्यातील अन्य साहित्यप्रकाराच्या तुलनेत आत्मचरित्राचे वेगळेपण लक्षात येईल.
- 4. विद्यार्थ्यांना नेमलेल्या आत्मचरित्राचे आकलन, आस्वाद आणि विश्लेषण करण्याची क्षमता विकसित होईल.

मध्ययुगीन मराठी साहित्य - निवडक मध्ययुगीन गद्य पद्य

1. विद्यार्थ्यांना मध्ययुगीन गद्य, पद्य साहित्य प्रकारची ओळख होईल.

2. विद्यार्थ्यांना नेमलेल्या अभ्यासपुस्तकातील मध्ययुगीन गद्य पद्य साहित्याचे आकलन,

आस्वाद आणि विश्लेषण करता येईल.

साहित्यविचार

Co-Ordinator IQAC

Shri Eknathrao Sahadu Shete Arts, Comm. & Sci.Senior College Deolali Camp, Nashik Deolali Shri Eknathrao Sahadu Shete

Art's Comm. & Sci. Senior College, Declali Camp, Nashik

- 2. विद्यार्थ्यांना वाक्यविण्यास आणा वाक्यविण्यास व्यवस्थेचा मराठी भाषेच्यासंदर्भात परीचय होईल.
- विदयार्थ्यांना अर्थविण्यास या संकल्पनेचा भाषावैज्ञानिक अंगाने परिचय होईल.

SEC-2-C-2 35025 कार्यक्रम संयोजनातील भाषिक कौशल्य भाग-१

- 1. विद्यार्थ्यांना कार्यक्रमांचे स्वरूप आणि प्रकार लक्षात येईल.
- 2. विद्यार्थ्यांना कार्यक्रमांचे संयोजनातील भाषिक कौशल्ये प्राप्त होतील.

SFC-2-D-2 36025 कार्यक्रम संयोजनातील भाषिक कौशल्य भाग-

- 1. विद्यार्थ्यांना कार्यक्रम संयोजनातील लेखन कौशल्ये प्राप्त होतील
- 2. विद्याध्यर्थांना कार्यक्रम संयोजनातील भाषिक कौशल्ये प्राप्त होतील

3. विद्यार्थ्यांना आभासी कार्यक्रम संयोजनातील भाषिक कौशृल्ये संपादन करता येतील,

Co-Ordinator

Deolali Camp, Nashik

Deolali Camp Nashik 422401

DEPARTMENT OF HISTORY

	PO - 1. Students will be able to think and they will be able to analyse thoughts.
	PO - 2. It will help in job creation by acquiring functional development skills.
Program Outcomes	PO - 3. There will be an increase in experiential knowledge.
	PO - 4. Students will gain expertise in specific areas of historical knowledge
	PO - 5. Students will be introduced to complementary disciplines such as art and architecture.
	PSO1. Understand The Importance of our Glorious Past.
	PSO2. Understand the Meaning of Nationalism and they Respect toward Great National Personality.
Program Specific Outcome	PSO3. Acquire conceptual knowledge of History.
	PSO4. Classified various phase in historical process & Developments PSO5. Take interest to discuss various debatable facts in subject of history
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FIRST YEAR BACHLOR OF ARTS (NEP 2020)

Course Outcomes	By the end of this course, student will be able to:
HIS 101-T MJ Indian National Movement (1857-1920) (Semester-1)	 Students will be able to criticize thematic issues in relation to Indian national movement. Students will get the adequate knowledge of Indian struggle of Independence.
HIS 102-P MJP Indian National Movement (1857-1920) (Semester-1)	 3. Students will be sensitized to the complex process through which modern politics was evolving in India. 4. A study of the movement will enable them to appreciate the interconnected nature of the processes of modernity.
HIS 151-T MJ Indian National Movement (1920-1950) (Semester-2)	 To identify the core ideas of National Movement. Outline the role of Gandhiji and other leaders in the Indian Freedom Struggle.
HIS 152-P MJP Indian National Movement (1920-1950) (Semester-2)	1. Students will be able to criticize thematic issues in relation to Indian national movement.

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FIRST YEAR BACHLOR OF ARTS (CBCS 2019)

Course Outcomes	By the end of this course, student will be able to:
Early India: From Prehistory to the Age of the Mauryas (Semester-1)	CO1: understood the salient features of Ancient Indian History CO2: understood the key concept related to Ancient India CO3: take interest to read historical maps, biographies, and novel related to ancient period. CO4: They take interest to visit historical place in relevance to ancient India Like caves, Temple, Art Architecture
Early India: Post Mauryan Age to the Rashtrakutas (Semester-2)	CO1: understood the Historical Process of Rise, Development & decline of Great Dynasty in Ancient India CO2: understood the Historical Process of transformation From Ancient to Medieval CO3: They take interest to understand The Power politics of North India before Muslim Invasion CO4: understood the socio- Economical & cultural transformation in Ancient India.

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SECOND YEAR BACHLOR OF ARTS (CBCS 2019)

Course Outcomes	By the end of this course, student will be able to:
CC-1(3) History of the Marathas (1630- 1707) (Semester-1) CC-2(3) History of the Marathas (1707- 1818) (Semester-2)	 Student will develop the ability to analyse sources for Maratha History. Student will learn significance of regional history and political foundation of the region. They will understand the role played by the Marathas in the 18th century India. They will be acquainted with the art of diplomacy in the Deccan region.
SEC -2 A (2) 2. Art & Architecture in Early India (Semester-1) SEC -2 B (2) 6. Medieval Indian, Art & Architecture (Semester-2)	Students will get an overall understanding of the emergence and development of the art and architecture in Early India. They will understand the emergence of the Pottery, Terracotta figures, Ornaments, Town Planning, preparation of seals and coins.
DSE-1A (3) 1. Medieval India - Sultanate Period (Semester-1) DSE-1B (3) 4. Medieval India: Mughal Period	 Provides examples of sources used to study various periods in history. Relates key historical developments during medieval period occurring in one place with another Draws comparisons between policies of different
(Semester-2)	rulers. 2. Understanding Role of Akbar in the consolidation of Mughal rule in India.

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DSE-2A (3) 2. Glimpses of the Modern World
- Part I (Semester-1)

DSE-2B (3) 5. Glimpses of the Modern World - Part II (Semester-2)

- 1. It will enable students to develop the overall understanding of the Modern World.
- 2. The students will get acquainted with the Renaissance, major political, socio-religious and economic developments during the Modern World.
- 3. It will enable students to understand the significant impact of the modern concepts such as Dictatorship, Cold War, Nationalism, Communism, Imperialism, Polarization, etc.
- 4. It will get students acquainted with the major nationalist movements, the World War II and its consequences, the Cold War and its Consequences.

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DSE-4 D (3) 8. Maharashtra in the 19th Century (Semester-1)

DSE-4 D (3) 11 Maharashtra in the 20th Century (Semester-2)

- 1. Student will develop the ability to analyse sources for 19th century Maharashtra History.
- 2. Student will learn significance of Regional History and Socio- religious reformism foundation of the region
- 3. It will enhance their Perception of 20th Century Maharashtra. 4. Appreciate the skills of leadership and the Socio-Religious System of the Maharashtra.

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Shete Arts Commission Camp Nashik 422401



DEPARTMENT OF GEOGRAPHY

Program Outcomes	PO-1: Demonstrate in-depth knowledge and understanding about the fundamental concepts, principles and theories in various fields of Geography. PO-2: Recognize and understand the various processes in branches of Physical and Human Geography. PO-3: Develops various skills related to Practical Geography like map making & reading, diagrams etc.
	PO-4: Demonstrates true values of leadership, cooperation, hard work, teamwork, etc. during the field works, surveys and field visits. PO-5: Solve local human and physical problems with application of their geographical knowledge and understanding.

FIRST YEAR BACHLOR OF ARTS (NEP 2020)

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Course Outcomes	By the end of this course, student will be able to:
	CO 1: Understand fundamental concepts, theories and
	approaches of Physical Geography
	CO 2: Recognize functions of complex interactive earth
GEO-101-T: Introduction to Physical	systems.
Geography	CO 3: Demonstrate scientific explanation of physical
(Semester-1)	processes of the atmosphere, hydrosphere and
,	lithosphere.
	CO 4: Describe diverse human activities in changing
	natural environment.
GEO-102-P: Practicals in Physical	CO 1: Identify different methods of relief representation
Geography	CO 2: Apply both qualitative and quantitative methods in
(Semester-1)	representing and interpreting geographical features
	CO 1: Define and explain the meaning, nature and scope
	of Human Geography.
GEO-151-T: Introduction to Human	CO 2: Discuss the different branches of Human
Geography	Geography
(Semester-2)	CO 3: Appreciate the growth distribution and
(Semester-2)	composition of population in India
. 3 1	CO 4: Analyse the types and patterns of Aural settlements
CFO-152-P: Practicals in Human	CO 1 Generally different methods of representation of
GEO-152-P: Practicals in Human	Principal
Shri Eknathras C.	Deolali Shri Eknathrao Sahadu Shete
Shri Eknathrao Sahadu Shete	Camp Nashik Art's Comm. & Sci. Senior College
Arts, Comm. & Sci.Senior College Deolali Camp, Nashik	N-1-10
z colum Camp, Nasnik	Deciali Camp, Nashik

Geography (Semester-2)

population indices.

CO 2: Identify patterns of nucleation and dispersion in human settlements

CO 3 : Calculate and interpret crop combination methods to analyze spatial patterns and trends in agricultural land use.

SECOND YEAR BACHLOR OF ARTS (CBCS 2019)

Course Outcomes	By the end of this course, student will be able
	to:
Gg: 210(A): Environmental Geography- I (Semester-3) & Gg.210 (B): Environment Geography- II (Semester-4)	CO 1: To create the awareness about dynamic environment among the student. CO 2: To acquaint the students with fundamental concepts of environment geography for development in different areas. CO 3: The students should be able to integrate various factors of Environment and dynamic aspect of Environmental geography. CO 4: To make aware the students about the problems of environment, their utilization and conservation in the view of sustainable development CO 5: To acquaint students about the past, presents and future utility and potentials of natural

THIRD YEAR BACHLOR OF ARTS (CBCS 2019)

By the end of this course, student will be able to:
CO 1: To understand the history of Tourism
CO 2: To introduce the students to the basic
concepts in Tourism Geography.
CO 3: To understand the types of Tourism
CO 4: To gain knowledge different aspects of
Tourism Geography.

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Arts, Comm. & Sci.Senior College
Deolali Camp, Nashik



DEPARTMENT OF POLITICAL SCIENCE

	PO - 1 The students will be able to understand the nature and scope of Political Science.		
Drogram Outgomes	PO - 2. The students shall understand the various traditional and modern approaches to the study of Political Science.		
Program Outcomes	PO - 3. The students will understand the basic concepts in Political Science apply these Concepts in making sense of social realities.		

FIRST YEAR BACHLOR OF ARTS (NEP 2020)

Course Outcomes	By the end of this course, student will be able to:
POL-101-T: Introduction to Political Science -I (Semester-1)	 The students will be able to understand the nature and scope of Political Science. The students shall understand the various traditional and modern approaches to the study of Political Science. The students will understand the basic concepts in Political Science and apply these Concepts in making sense of social realities.
POL-102-P: Political Science - Practical (Semester-1)	 Students will know how to apply the concepts learned in class in real life. The students will know how the contents of Political Science are actually used.
POL-151-T: Introduction to Political Science -II (Semester-2)	 The students will be able to understand the nature and scope of Political Science. The students shall understand the various traditional and modern approaches to the study of Political Science. The students will understand the basic concepts in Political Science and apply these concepts in making sense of social realities.
POL-152-P: Political Science - Practical - II (Semester-2) Co-Ordinator IQAC Shri Eknathrao Sahadu Shete	1. Students will know how to apply the concepts learned in class in real life. 2. The students will know how the contents of Political Science are actually used. Principal Shri Eknathrao Sahadu Shete

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FIRST YEAR BACHLOR-OF ARTS (CBCS 2019)

Course Outcomes	By the end of this course, student will be able to:
(CC) INTRODUCTION TO INDIAN CONSTITUTION (Semester-1) (CC)INTRODUCTION TO INDIAN CONSTITUTION (Semester-2)	1. To acquaint students with the important features of the Constitution of India and with the basic framework of Indian government. 2. To familiarize students with the working of the Constitution of India.

SECOND YEAR BACHLOR OF ARTS (CBCS 2019)

Course Outcomes	By the end of this course, student will be able to:
(C.C.) AN INTRODUCTION TO POLITICAL IDEOLOGIES (Semester-III) (C.C.) AN INTRODUCTION TO POLITICAL IDEOLOGIES (Semester-IV)	 Role of different political ideologies and their impact in politics Close link between an idea and its actual realization in public policy Legacy of all the major ideologies
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THIRD YEAR BACHLOR OF ARTS (CBCS 2019)

Course Outcomes	By the end of this course, student will be able to:
(C.C.) LOCAL SELF GOVERNMENT IN MAHARASHTRA (Semester-V) (C.C.) LOCAL SELF GOVERNMENT IN MAHARASHTRA (Semester-VI)	 To introduce the evolution of Local Self Government in Maharashtra To make students aware about 73rd and 74th Constitutional Amendments To introduce the students the structure of Local Self Government To make students aware about composition, power and functions of local bodies

Camp

Co-Ordinator
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Deolali Camp, Nashik

Principal Principal

DEPARTMENT OF ECONOMICS

	PO - 1.A strong understanding of economics therioes.microeconomics,macroeconomics and other specialized areas of economics
	PO - 2. An important skill in today changing business environment
	PO - 3. They will also able to propose evidence base policy recommendation to address economic challenges and promote economic growth
Program Outcomes	PO - 4. Students will developed critical thinking skill to be analyses economic problems and proposed innovative solutions based on economic principles and evidence
	PO - 5. Student will have developed advanced research writing skill, including research economic data through written report, policy briefs, other economic writing.

FIRST YEAR BACHLOR OF ARTS (NEP 2020)

Course Outcomes	By the end of this course, student will be able to:	
ECO101 T- INDAIAN ECONOMY I (Semester I)	To familiarize the students with the recent developments the economy The students shall be able to understand nature of developed and developing economics Learners will understand major issues regarding economic development in India	
ECO 102 P -INDIAN ECONOMY II (Semester I)	 4. Students will be Able to understand the various aspects of Population. 5. TO the help students to prepare for varied competitive examination 6. The students will understand the challenges before industry ,agriculture ,service sector in India. 	
Co-Ordinator IQAC Shri Eknathrao Sahadu Shete Arts, Comm. & Sci.Senior College Deolali Camp, Nashik	1. To understand nature of developed and developing economics. Principal Shri Eknathrao Sahadu Shete Camp Nashik Art's Comm. & Sci. Senior College, Deolali Camp, Nashik	

DSE-2A Macro Economics (Semester-III)

DSE-2BMacro Economics (Semester-IV)

- 1. To familiarize students with various concept of national income.
- 2. To introduce students to the role of money in an economy.
- 3. To introduce students to the various instruments of monetary and fiscal policies.
- 4. To introduce students to the conceptual and theoretical fretworks of inflation ,deflation and stagflation ,business Cycle.

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Art's Comm. & Sci. Senior College,
Deolali Camp, Nashik

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Co-Ordinator
IQAC
Shri Eknathre, Sinadu Shete
Arts, Comm. & Sci Schior College
Dubidai Camp, Ivic IA

FIRST YEAR BACHLOR OF ARTS (CBCS 2019)

Course Outcomes	By the end of this course, student will be able to:	
INDIAN ECONOMIC ENVIOREMNT I (Semester I)	1.Abilty to develop an understanding of economic environment and factors affecting economic environment 2.abitly to developed awareness on various	
INDIAN ECONMIC ENVIOREMENT II (Semester II)	developments different sectors an economy (Agriculture, Industry, Services, Banking) 3.Abilty to compare and contrast Indian Economy With Other World Economics	

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Deolali Camp Nashik

Principal Shri Eknathrao Sahadu Shete Art's Comm. & Sci. Senior College,

Deolali Camp, Nasnik

F. Y. B. A Hindi

2024



सावित्रीबाई फुले पुणे विश्वविद्यालय, पुणे Savitribai Phule Pune University, Pune

राष्ट्रीय शिक्षा नीति 2020 [NEP] के अंतर्गत प्रथम वर्ष कला हिंदी का पाठयक्रम Under The New Education Policy 2020 [NEP] FYBA Hindi Course

बी.ए.प्रथम वर्ष के लिए निर्धारित पाठ्यक्रम का ढाँचा

Credit Framework for Under Graduate (UG) (2024-25)

संबद्ध महाविद्यालयों के लिए For Affiliated colleges

प्रथम वर्ष कला प्रथम एवं द्वितीय अयन

Co-Ordinator

Shri Eknathrao Sahadu Shete rts, Comm. & Sci.Senior College Deolali Camp, Nashik

Shete Arts, Connumber Camp
Nashik
422401

PROGRAMME OUTCOMES (POs):

इस पाठ्यक्रम का अध्ययन करने के बाद विद्यार्थियों में विविध क्षमताओं का विकास होगा।

- PO 1 Disciplinary Knowledge हिंदी भाषा और साहित्य के बुनियादी तत्व समझ पाएंगे।
- PO 2 Communication Skills श्रवण, भाषण, वाचन तथा लेखन कौशल से अवगत होंगे।
- PO 3 Critical Thinking आलोचनात्मक दृष्टि विकसित होगी।
- PO 4 Problem Solving सामाजिक, सांस्कृतिक, राजनीतिक, आर्थिक, भाषिक समस्याओं का समाधान खोजने का प्रयत्न करेंगे।
- PO 5 Analytical reasoning प्राप्त जानकारी का तटस्थता से आस्वादन और विश्लेषण करना सीखेंगे।
- PO 6 Research related skills अनुसंधान कार्य के लिए आवश्यक गुणों का विकास होगा।
- PO 7 Cooperation / Team work लक्ष्य प्राप्ति के लिए सामृहिक प्रयास करना सीखेंगे।
- PO 8 Scientific reasoning प्राप्त ज्ञान का वैज्ञानिक दृष्टि से परीक्षण अथवा प्रस्तुतिकरण करना सीखेंगे।
- PO 9 Reflective thinking वैचारिक गंभीरता अथवा गहराई से विचार करने की प्रवृत्ति विकसित होगी।
- PO 10 Self-directed learning संबंधित शैक्षिक कार्य का स्वयं अध्ययन करने के लिए बढ़ावा मिलेगा।
- PO 11 Information / Digital literacy हकश्राव्य माध्यमों की सहायता से अध्ययन करेंगे।
- PO 12 Multicultural Competence सांस्कृतिक वैविध्य समझने की क्षमता विकसित होगी।
- PO 13 Moral / Ethical Values नैतिक मूल्य विकसित होने अथवा आत्मसात करने में सहायता मिलेगी।
- PO 14 leadership Readiness विषय से संबंधित क्षेत्र में नेतृत्व करने के कौशल प्राप्त होंगे।

PO 15 life-long learning निरंतर अध्ययन और अनुसंधान कार्य करने में रुचि निर्माण

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Deolali Camp Nashik 42240

Principal

Shri Eknathrao Sahadu Shete Art's Comm. & Sci. Senior College,

Deolali Camp, Nashik

(Program Specific Outcomes (PSOs): पाठ्यक्रम अध्ययन की विशिष्ट निष्पत्ति

- PSO 1 Domain Know ledge हिंदी साहित्य अथवा संबंधित पाठ्यक्रम विषयक विविध अवधारणा समझेंगे तथा उसका सौंदर्यशास्त्रीय आकलन होगा।
- PSO 2 Professiona | Ski | Is
 भाषिक कौशल आत्मसात होंगे और तंत्रज्ञान का भाषिक व्यवहार में कुशलतापूर्वक प्रयोग कर सकेंगे ।
- PSO 3 Research हिंदी भाषा और साहित्य संबंधी अनुसंधान कार्य हेतु प्रेरणा मिलेगी।
- PSO 4 Socia । Responsibility सामाजिक जिम्मेदारियों का एहसास होगा।
- PSO 5 Persona lity Deve lopment व्यक्तित्व विकास में सहायता होगी।

Co-Ordinator

Shri Eknathrao Sahadu Shete Arts, Comm. & Sci.Senior College Deolali Camp, Nashik Stelentiers

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प्रथम वर्ष कला (F.Y.B.A.) (सामान्य) CBCS (Old (प्रथम अयन) 2019 Pattern

पाठयचर्या : वैकल्पिक हिंदी प्रश्नपत्र - 1 A

3 कर्माक उददेश्य:

- 1. छात्रों को हिंदी काव्य साहित्य का परिचय देना।
- 2. हिंदी कहानी साहित्य से अवगत कराना।
- 3. हिंदी भाषा दवारा संवाद कौशल विकसित करना।
- 4. मौलिक लेखन की ओर रूझान बढ़ाना।
- विज्ञापन लेखन कौशल विकसित करना।
- 6. अनुवाद संबंधी जानकारी देना।
- हिंदी कंप्यटिंग का परिचय देना।

1. 16 (1 1 6)	न प्राप्त प्राप्त प्राप्त
	प्रथम सत्र / प्रथम अयन
इकाई - I	कहानी साहित्य:
178 (25)	एक टोकरी भर मिट्टी – माधवराव सप्रे
	ईदगाह - प्रेमचंद
	जिंदगी और गुलाब के फुल – उषा प्रियंवदा
	युद्ध – शानी
	मिसेंस डिसूजा के नाम पत्र – अलका सरावगी
इकाई - II	काव्य साहित्य:
	जुही की कली – निराला
	में नीर भरी दुख की बदली — महादेवी वर्मा
	कालिदास – नागार्जुन
	रोटी और संसद – धूमिल
	धार – अरुण कमल
इकाई – III	साहित्येतर पाठ्यक्रम :
	संवाद कौशल, सूत्रसंचालन, समूह चर्चा
	हिंदी कंप्यूटिंग : यूनिकोड (Unicode) की जानकारी।
=	इंटरनेट की सामान्य जानकारी
	हेंदी सॉफ्टवेअर की जानकारी।

(उपर्युक्त सभी इकाइयों से आलोचनात्मक प्रश्न पूछे जाएँगे। पाँचवा प्रश्न ससंदर्भ व्याख्या का पूछा जाएगा जिसमें प्रथम दो इकाइयों से ससंदर्भ व्याख्या के लिए प्रश्न पूछा जाएगा।)

अंक विभाजन – पूर्णांक : 100

आंतरिक मूल्यांकन - 30 (लघुत्तरी परीक्षा - 15, शोध परियोजना - 10, प्रस्तुतिकरण -

सत्रांत परीक्षा - 70

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CBCS/F.Y.B.A./F.Y.B.com/Syllabus/2019/Hindi/BOS Chairman/J.Doc.

प्रथम वर्ष कला (F.Y.B.A.) (सामान्य)

(द्वितीय अयन)

पात्यचर्या : वैकल्पिक हिंदी प्रश्नपत्र - 1 B

3 कर्माक

उद्देश्य :

- 1. छात्रों को हिंदी काव्य साहित्य का परिचय देना।
- 2. हिंदी कहानी साहित्य से अवगत कराना।
- 3. निबंध लेखन कौशल को विकसित करना।
- 4. छात्रों को विज्ञापन लेखन से अवगत करना।

	द्वितीय सत्र/द्वितीय अयन
इकाई- I	काव्य साहित्य :
	आदमी को प्यास लगती है – ज्ञानेंद्रपति
	रोशनी के उस पार – ओमप्रकाश वाल्मीकि
	उतनी दूर मत ब्याहना बाबा – निर्मला पुत्तुल
	किताबें झाँकती हैं — गुलज़ार
	नींव की ईंट हो तुम दीदी — उद्यप्रकाश
इकाई -II	गद्य विधा :
	सरजू भैया – रामवृक्ष बेनीपुरी (रेखाचित्र)
	भय — आ. रामचंद्र शुक्ल (निबंध)
	एक बूंद सहसा उछली – अज्ञेय (यात्रा वर्णन)
	अकबरी लौटा – अन्नपूर्णानंद वर्मा (व्यंग्य)
	प्रतिशोध – डॉ. रामकुमार वर्मा (एकांकी)
इकाई -III	एकांकी तथा साहित्येतर पाठ्यक्रम :
	लेखन कौशल : स्ववृत्त लेखन
	निबंध लेखन
	विज्ञापन लेखन : (दैनिक पत्र—पत्रिकाओं के लिए)
	वाक्य शुद्धिकरण (संज्ञा, सर्वनाम, विशेषण क्रिया के संबंध में)

(उपर्युक्त सभी इकाइयों से आलोचनात्मक प्रश्न पूछे जाएँगे। पाँचवा प्रश्न ससंदर्भ व्याख्या का पूछा जाएगा जिसमें प्रथम दो इकाइयों से ससंदर्भ व्याख्या के लिए प्रश्न पूछा जाएगा।)

अंक विभाजन - पूर्णांक : 100

आंतरिक मूल्यांकन — 30 (लघुत्तरी परीक्षा — 15, शोध परियोजना — 10, प्रस्तुतिकरण्

सत्रांत परीक्षा - 70

ससंदर्भ द्याख्या QAC Shri Eknathrao Sahadu Shete

Comm & Sci Senior College

42240

Deolali

Camp

Nashik

Principal Shri Eknathrao Bahadu Shete

Art's Comm. & Sci Senior College,

Deolali Camp, Nashik

CBCS/F.Y.B.A./POBCIE/FyCerr/2011/Jishi/ROS Chairman/J.Doc.

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S.YBA HINDI

2019 Pattern

2022-23 (CBCS - Autonomy 21 Pattern)

Course/ Paper Title	CC- आधुनिक काव्य, कहानी तथा व्यावहारिक हिंदी
Course Code	21ABH235
Semester	III
No. of Credits	3

Aims & Objectives of the Course

Sr. No.	Objectives
1.	छात्रों को काव्य साहित्य से परिचित कराना ।
2.	छात्रों को कहानी साहित्य से परिचित कराना ।
3.	छात्रों को हिंदी के लेखक, कवि तथा साहित्य के माध्यम से नैतिक मूल्यों का महत्व बताना ।
4.	छात्रों को हिंदी कारक व्यवस्था का उचित ज्ञान देना।
5.	समोच्चारित भिन्नार्थक शब्दों के अर्थ बताकर उनका प्रत्यक्ष वाक्य में प्रयोग करने हेतु
	प्रोत्साहित करना ।
6.	अनुवाद लेखन के महत्व को समझाना ।

Expected Course Specific Learning Outcomes

Sr. No.	Learning Outcome	
1.	छात्रों में कविता के प्रति रूचि उत्पन्न होगी, उसका अर्थ ग्रहण करने की क्षमता बढ़ेगी।	
2.	छात्र भाषा के व्यावहारिक एवं व्याकरणिक पहलुओं से भलीभाँति परिचित होंगे।	
3.	छात्रों को वास्तविक जीवन का परिचय प्राप्त होगा।	
4.	छात्रों में मृजन शक्ति विकसित होंगी ।	
5.	छात्र व्यवहार में हिंदी भाषा का उचित प्रयोग कर सकेंगे।	

Camp Nashik

Co-Ordinator

IQAC
Shri Eknathrao Sahadu Shete
Arts, Comm. & Sci.Senior College
Deolali Camp, Nashik

Principal
Shri Eknathrao Sahadi

SYBA HINDI

(CBCS - Autonomy 21 Pattern)

Course/ Paper Title	CC- हिंदी व्यंग्य साहित्य तथा व्यावहारिक हिंदी
Course Code	21ABH245
Semester	IV
No. of Credits	3

Aims & Objectives of the Course

Sr. No.	Objectives
1.	छात्रों को व्यंग्य विधा से परिचित कराना।
2.	छात्रों को व्यंग्यात्मक कविताओं का बोध कराना ।
3.	छात्रों को ट्यंग्यात्मक कहानियों के माध्यम से समाज की वास्तविकता दर्शाना ।
4.	छात्रों को साक्षात्कार कला से अवगत कराना ।
5.	छात्रों को भाषा का मोबाइल तंत्र समझाना ।
6.	छात्रों को पल्लवन कला से अवगत कराना ।

Expected Course Specific Learning Outcome

Sr. No.	Learning Outcome	
1.	छात्रों को भाषा कौशल की जानकारी प्राप्त होगी ।	
2.	छात्र व्यंग्यात्मक रचनाओं से प्रभावित होकर अपने जीवन में उचित मूल्यों को महत्व	
	देने में सक्षम बनेंगे ।	
3.	साक्षात्कार कला में निपुणता हासिल कर उसका व्यवहार में प्रयोग कर सकेंगे ।	
4	मोबाइल के माध्यम से व्यवहार में हिंदी भाषा का उचित प्रयोग कर सकेंगे।	
5 छात्र पल्लवन के माध्यम से किसी कहावत, वाक्यांश या विषय को		
	विस्तारित करने में सक्षम होंगे।	

Co-Ordinator
IQAC
Shri Eknathrao Sahadu Shete
Arts, Comm. & Sci.Senior College Deolali Camp, Nashik



सावित्रीबाई फुले पुणे विश्वविद्यालय, पुणे Savitribai Phule Pune University, Pune

> हिंदी पाठ्यक्रम Hindi Syllabus

संबंद्ध महाविद्यालयों के लिए For Affiliated colleges

> बी. ए. तृतीय वर्ष कला (पंचम एवं षष्ठ अयन) Fifth & Sixth Semester

> > शैक्षिक वर्ष Academic year

Deolali Camp, Nashik

Shri Eknathrao \$ahadu Shete

Art's Comm. & Sci. Senior College, Deolali Camp, Nashik

बी. ए. तृतीय वर्ष कला (शैक्षिक वर्ष 2021-2022 से)

पंचम अयन (Fifth Semester)

पाठ्यचर्या : Core Course - 1E (G3) पाठ्यचर्या : कथेतर विधाएँ

3 कर्माक (3 Credit)

उद्देश्य :

- 1. छात्रों को संस्मरण साहित्य से अवगत करना।
- 2. छात्रों को रेखाचित्र साहित्य से अवगत करना।
- 3. छात्रों को मूल्यांकन की दृष्टि का विकास करना।
- 4. सभा-इतिवृत्त लेखन कौशल वृद्धि का विकास करना।
- 5. वार्ता-लेखन कौशल दृष्टि निर्माण करना।

इकाई	पाठ्यविषय	तासिकाएँ
इकाई– I	संस्मरण :	15
	 शरत् : एक याद — अमृतलाल नागर प्रेमचंद : एक स्मरण — महादेवी वर्मा हम हशमत — कृष्णा सोबती त्यागमूर्ति 'निराला' — शिवपूजन सहाय 	तासिकाएँ
इकाई— II	रेखाचित्र : 1. पीपल — सच्चिदानंद हीरानंद वात्स्यायन 'अज्ञेय' 2. डबली बाबू — विनय मोहन शर्मा 3. अमृत के स्रोत — जगदीश माथुर। 4. रिजया — रामवृक्ष 'बेनीपुरी'	15 तासिकाएँ
इकाई—III	पाठ्यपुस्तकेत्तर पाठ्यक्रम : 1. सभा—इतिवृतलेखन 2. वार्ता—लेखन	15 तासिकाएँ

पूर्णीक : 100

आंतरिक मूल्यांकन : 30 अंक (लघुत्तरी परीक्षा- 20 अंक, शोध परियोजना / समूह परियोजना / मौखिक प्रस्तुति /

क्षेत्रीय अध्ययन- 10 अंक)

सत्रांत परीक्षा : 70 अंक

सत्रांत परीक्षा – प्रश्नपत्र कृ प्रारूप :

Co-Ordinator

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Arts, Comm. & Sci.Senior College
Deolali Camp, Nashik

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बी. ए. तृतीय वर्ष कला (शैक्षिक वर्ष 2021–2022 से)

षष्ठ अयन (Sixth Semester)

पाठ्यचर्या : Core Course - 1F (G3) पाठ्यचर्या : गज़ल विधा और पत्राचार

3 कर्माक (3 Credit)

उददेश्य :

- 1. छात्रों को गज़ल साहित्य से अवगत करना।
- 2. छात्रों को गज़लकार के व्यक्तित्व से अवगत करना।
- 3. छात्रों में मूल्यांकन की दृष्टि का विकास करना।
- 4. छात्रों को सरकारी पत्र लेखन से अवगत करना।

इकाई	पाठ्यविषय	तासिकाएँ
इकाई— I	'साये में धूप' (गज़ल संग्रह) – दुष्यंत कुमार	15
-000. II M	1. गज़ल : अर्थ, परिभाषा, तत्व।	तासिकाएँ
	2. दुष्यंत कुमार का साहित्यिक परिचय।	VIII VI 471 Z
	ग़ज़ल रचनाएँ : (साये में धूप)	
	1. कहाँ तो तय था चिरागाँ हरेक घर के लिए,	
	कहाँ चिराग मयस्सर नहीं शहर के लिए	
	2. कैसे मंजर सामने आने लगे हैं,	
	गाते—गाते लोग चिल्लाने लगे हैं	
	3. इस नदी की धार में ठंडी हवा आती तो है,	
	नाव जर्जर ही सही, लहरों से टकराती तो है	
	4. भूख है तो सब कर, रोटी नहीं तो क्या हुआ,	
	आजकल दिल्ली में है जेरे बहस ये मुद्दआ 5. कहीं पे धूप की चादर बिछाके बैठ गए,	
	 कहीं पे धूप की चादर बिछाके बैठ गए, कहीं ये शाम सिरहाने लगा के बैठ गए 	700
	6. चाँदनी छत पे चल रही होगी,	
	अब अकेली टहल रही होगी	
		4-
इकाई $-II$	गज़ल रचनाएँ : (साये में धूप)	15
	1. हो गई है पीर पर्वत-सी पिघलनी चाहिए,	तासिकाएँ
	इस हिमालय से कोई गंगा निकलनी चाहिए	
	2. आज सड़कों पर लिखे हैं सैकडों नारे न देख,	
	घर अँधेरा देख तू, आकाश के तारे न देख	
	3. मेरे गीत तुम्हारे पास सहारा पाने आएँगे,	
图上	मेरे बाद तुम्हें ये मेरी याद दिलाने आएँगे प्रेथ सच है कि पाँवों ने बहुत कष्ट उठाए,	
	प्य संच है कि पावों ने बहुत केष्ट उठाए, rdinatout पाँव किसी तरह राहों <u>पे तो</u> आए	
A Committee of the Comm	UAC	nal
Arts, Comm. 8	rdinator पाँव किसी तरह राहों पे तो आए QAC rao Sanadarsheक संभावनाएँ समुका के Arts Comm. & Sci. Seniog Nashik	The second second
Deolali (Camp, Nasnik	Senior College,

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Shikshan Mandal Bhagur Arts, Commerce & Science College, Deolali Camp, Nashik

Matoshri Yamunabai Karandikar Sankul, Sv.No. 306/1A/4B/2, Barnes School Road, Deolali camp. Tal & Dist. Nashik-422401

Department of Commerce-Academic Year 2019-20

Programme Outcomes (PO) & Course Outcomes (CO) offered by the institution are stated and displayed on websites.

	Programme Outcome: Bcom		
PO1	 Practical Exposure that would equip the students to face the challenges in the modern era in commerce and business. 		
PO2	 The course offers a number of values based and job oriented Skills to ensure that students become enabled on two feet for every challenging situation. 		
PO3	 Proficiency for completing various professional Courses like management, CA.,CMA.,CS.,MBA and Law 		
PO4	 Ability to recognize the role of businessman, entrepreneurs, consultants etc. 		
PO5	 Thorough knowledge of fundamentals of Commerce, Trade, Economics, Management etc. 		
PO6	 Expertise in way to contribute towards the development of new practices and procedures of Administration, Banking and finance, Entrepreneurship, Marketing, Insurance, Computers, Laws, Accountancy etc. 		
PO7	 Students become competent to demonstrate the role of Accountant, Manager, Advisor, Analyzer etc. in society and business. 		
PO8	 Learners will be able to do higher education and advance research in the field of commerce and finance. 		

Course Outcomes: Bcom

Class	Sem	Course Title with Sub. Code	Outcome
FYBCOM	I	112 Financial Accounting- I	 Students acquainted with the knowledge of various accounting concepts. Students become knowledgeable about accounting procedures, methods and techniques. Acquaint them with a practical approach to accounts writing by using software packages e.g. Tally ERP-9, SAP etc.

Co-Ordinator IQAC

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FYBCOM	I	114 (A)	 Students are prepared for competitive examinations by inculcating them with the
		Business Mathematics and Statistics - I	 concept of Simple interest, compound interest and the concept of EMI. Imparted the concept of shares and to calculate Dividend, concept of population and sample. They knew how to calculate various types of averages and variations along with the application of profit and loss in business.
FYBCOM	I	115 (A) Organisational Skill Developments - I	 On successful completion of this subject the students acquire the Knowledge about the various types of business organisations, office management and related practices.
FYBCOM	I	116 (C) Marketing and Salesmanship (Fundamentals of Marketing) - I	 On successful completion of this course the students should get the practical knowledge and the tactics in the marketing.
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Co-Ordinator
IQAC
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Arts, Comm. & Sci.Senior College
Deolali Camp, Nashik



Principal
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Deolali Camp, Nashik

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FYBCOM	п	115 (A) Organisational Skill Developments - II	 On successful completion of this subject the students acquire the Knowledge about the various types of business organisations, office management and related practices.
FYBCOM	п	116 (B) Insurance And Transport – II	 Students become knowledgeable on various insurance aspects and the importance of transport facilities to a business.
FYBCO M	п	116 (C) Marketing and Salesmanship (Fundamentals of Marketing) - II	 On successful completion of this course the students should get the practical knowledge and the tactics in the marketing.
FYBCO M	п	116 (E) Business Environment & Entrepreneurship - II	With this subject students are motivated to make their mind set for taking up entrepreneurship as a career.

Co-Ordinator
IQAC

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Matoshri Yamunabai Karandikar Sankul, Sv.No. 306/1A/4B/2,Barnes School Road, Deolali camp, Tal & Dist. Nashik-422401

Department of Commerce-Academic Year 2020-21

Programme Outcomes (PO) & Course Outcomes (CO) offered by the institution are stated and displayed on websites.

	Programme Outcome: Bcom		
PO1	 Practical Exposure that would equip the students to face the challenges in the modern era in commerce and business. 		
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Course Outcomes: Bcom

Class	Sem	Course Title with Sub. Code	Outcome
FYBCOM	Ι.	112 Financial Accounting- I	 Students acquainted with the knowledge of various accounting concepts. Students become knowledgeable about accounting procedures, methods and techniques. Acquaint them with a practical approach to accounts writing by using software packages e.g. Tally ERP 9, SAP etc.

Co-Ordinator IQAC

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FYBCOM	I	114 (A)	 Students are prepared for competitive examinations by inculcating them with the
		Business Mathematics and Statistics - I	 concept of Simple interest, compound interest and the concept of EMI. Imparted the concept of shares and to calculate Dividend, concept of population and sample. They knew how to calculate various types of averages and variations along with the application of profit and loss in business.
FYBCOM	I	115 (A) Organisational Skill Developments - I	 On successful completion of this subject the students acquire the Knowledge about the various types of business organisations, office management and related practices.
FYBCOM	I	116 (C) Marketing and Salesmanship (Fundamentals of Marketing) - I	 On successful completion of this course the students should get the practical knowledge and the tactics in the marketing.
FYBCOM	п	- I 112 Financial Accounting- II	 Students acquainted with the knowledge of various accounting concepts. Students become knowledgeable about accounting procedures, methods and techniques. Acquaint them with a practical approach to accounts writing by using software packages e.g. Tally ERP-9, SAP etc.
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Co-Ordinator

Shri Eknathrao Sahadu Shete Arts, Comm. & Sci.Senior College Deolali Camp, Nashik



Principal

Shri Eknathrao Sahadu Shete Art's Comm. & Sci. Senior College, Deolali Camp, Nashik

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FYBCOM	п	115 (A) Organisational Skill Developments - II 116 (B) Insurance And Transport -	 On successful completion of this subject the students acquire the Knowledge about the various types of business organisations, office management and related practices. Students become knowledgeable on various insurance aspects and the importance of transport facilities to a
FYBCO M	п	II 116 (C) Marketing and Salesmanship (Fundamentals of Marketing) - II	 On successful completion of this course the students should get the practical knowledge and the tactics in the marketing.
FYBCO M	п	116 (E) Business Environment & Entrepreneurship - II	With this subject students are motivated to make their mind set for taking up entrepreneurship as a career.
S.Y.B.Com.	ш	241 Business Communication – I	 Students will be able to communicate in the language of business. Developing intellectual, personal and professional abilities through effective communication skills; ensuring high standard of behavioural attitude through literary subjects and shaping the students' socially responsible citizens.
S.Y.B.Com.	ш	242 Corporate Accounting - I	 To enable the students to be aware of Corporate Accounting in conformity with the provision of the Companies Act 2013. After the successful completion of the course the student should have a thorough knowledge on the accounting practice prevailing in the corporate world.
S.Y.B.Com.	Ш	244 Business Management - I	The students get the understanding of Principles & functions of Management, Process of decision making, and modern trends in management process.

Co-Ordinator

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S.Y.B.Com.	ш	245 Elements of Company Law - I	 Enlighten the students' knowledge on Companies Act 2013 and Secretarial practices.
S.Y.B.Com.	ш	236 (A) Business Administration - I	 Students are inculcated with the basic knowledge about various forms of business organisations, business environment and its implications thereon.
			 They will be able to be aware of the latest trends in business.
S.Y.B.Com.	ш	236 (E) Cost and Works Accounting -I(Basic of COST Accounting) - I	 Enables the students to inculcate knowledge on Cost sheet, Material issues, Labour cost, Financial statement analysis, Budgeting etc.
S.Y.B.Com.	ш	236 (H) Marketing Management - I	 Enable the student to understand the Principles of marketing management, market segmentation Product life cycle, pricing, branding etc.
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Co-Ordinator

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Co-Ordinator IQAC

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Department of Commerce- Academic Year 2021-2022

Programme Outcomes (PO) & Course Outcomes (CO) offered by the institution are stated and displayed on websites.

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Course Outcomes: Bcom

Class	Sem	Course Title with Sub. Code	Outcome
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Co-Ordinator

Shri Eknathrao Sahadu Shete Arts, Comm. & Sci.Senior College Deolali Camp, Nashik Deolali Camp Nashik

Principal

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Shikshan Mandal Bhagur Arts, Commerce & Science College, Deolali Camp, Nashik

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I	114 (A)	 Students are prepared for competitive examinations by inculcating them with the
	Business Mathematics and Statistics - I	 concept of Simple interest, compound interest and the concept of EMI. Imparted the concept of shares and to calculate Dividend, concept of population and sample. They knew how to calculate various types of averages and variations along with the application of profit and loss in business.
I	115 (A) Organisational Skill Developments - I	 On successful completion of this subject the students acquire the Knowledge about the various types of business organisations, office management and related practices.
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Camp

Nashik

Co-Ordinator

IQAC Shri Eknathrao Sahadu Shete Arts, Comm. & Sci.Senior College Deolali Camp, Nashik

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Co-Ordinator

Shri Eknathrao Sahadu Shete Arts, Comm. & Sci.Senior College Deolali Camp, Nashik Principal

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S.Y.B.Com.	ш	236 (H) Marketing Management - I	 Enable the student to understand the Principles of marketing management, market segmentation Product life cycle, pricing, branding etc.
S.Y.B.Com.	IV	241 Business Communication – II	 Students will be able to communicate in the language of business. Developing intellectual, personal and professional abilities through effective communication skills; ensuring high standard of behavioural attitude through literary subjects and shaping the students' socially responsible citizens.
S.Y.B.Com.	IV	242 Corporate Accounting - II	 To enable the students to be aware of Corporate Accounting in conformity with the provision of the Companies Act 2013. After the successful completion of the course the student should have a thorough knowledge
			on the accounting practice prevailing in the corporate world.
S.Y.B.Com.	IV	244 Business Management - II	The students get the understanding of Principles & functions of Management, Process of decision making, and modern trends in management process.

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Shri Eknathrao Sahadu Shete Arts, Comm. & Sci.Senior College Deolali Camp, Nashik

Shri Eknathrao Sahadu Shete Art's Cemm. & Sci. Senior College, Deolali Camp, Nashik

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AFFILIATED TO SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE,

Shikshan Mandal Bhagur Arts, Commerce & Science College, Deolali Camp, Nashik

Matoshri Yamunabai Karandikar Sankul, Sv.No. 306/1A/4B/2,Barnes School Road, Deolali camp, Tal & Dist. Nashik-422401

S.Y.B.Com.	IV	245 Elements of Company Law - II	 Enlighten the students' knowledge on Companies Act 2013 and Secretarial practices.
S.Y.B.Com.	IV	236 (A) Business Administration - II	 Students are inculcated with the basic knowledge about various forms of business organisations, business environment and its implications thereon. They will be able to be aware of the latest trends in business.
S.Y.B.Com.	IV	236 (E) Cost and Works Accounting -I(Basic of COST Accounting) - II	 Enables the students to inculcate knowledge on Cost sheet, Material issues, Labour cost, Financial statement analysis, Budgeting etc.
S.Y.B.Com.	IV	236 (H) Marketing Management - II	 Enable the student to understand the Principles of marketing management, market segmentation Product life cycle, pricing, branding etc.
T.Y.B.Com.	V	351 Business Regulatory Framework - I	 Enables to inculcate knowledge on various laws relating to business such as law of
			contract, law of sale of goods, law of agency, Negotiable Instruments Act etc.
T.Y.B.Com.	v	352 Advanced Accounting – I	 Providing entire coverage of advanced accountancy. Acquired knowledge on preparation of departmental accounts with respect to Apportionment of overheads.
T.Y.B.Com.	v	354 Auditing and Taxation - I	 Creating basic conceptual knowledge about the auditing principles. Understanding the basic concepts and to acquire knowledge about Computation of Income, Submission of Income Tax Return, Advance Tax, and Tax deducted at Source, Tax Collection Authorities under the Income Tax Act, 1961.
T.Y.B.Com.	v	355 (A) Business	 Acquaint the students with basic concepts & functions of HRD and nature of Marketing functions of a

Co-Ordinator

IQAC Shri Eknathrao Sahadu Shete Arts, Comm. & Sci.Senior College Deolali Camp, Nashik Shete Arts, Connant of Camp Nashik A22401

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Shikshan Mandal Bhagur Arts, Commerce & Science College, Deolali Camp, Nashik

Matoshri Yamunabai Karandikar Sankul, Sv.No. 306/1A/4B/2, Barnes School Road, Deolali camp, Tal & Dist. Nashik-422401

		Administration – I	business enterprise.
T.Y.B.Com.	v	355 (E) Cost and Works Accounting. Special Paper I	 The students get a thorough knowledge on the cost accounting principles and the methods of cost accounting.
T.Y.B.Com.	V	355 (H) Marketing Management-I	 Enable the students to understand the Principles of marketing management, market segmentation Product life cycle, pricing, branding, advertising, sales promotions, marketing research and CRM.
T.Y.B.Com.	VI	361 Business Regulatory Framework - I	 Enables to inculcate knowledge on various laws relating to business such as law of contract, law of sale of goods, law of agency, Negotiable Instruments Act etc.
T.Y.B.Com.	VI	362 Advanced Accounting -I	 Providing entire coverage of advanced accountancy. Acquired knowledge on preparation of departmental accounts with respect to Apportionment of overheads.
T.Y.B.Com.	VI	364 Auditing and Taxation - I	 Creating basic conceptual knowledge about the auditing principles. Understanding the basic concepts and to acquire knowledge about Computation of Income, Submission of Income Tax Return, Advance Tax, and Tax deducted at Source, Tax Collection Authorities under the Income Tax Act, 1961.
T.Y.B.Com.	VI	365 (A) Business Administration – I	 Acquaint the students with basic concepts & functions of HRD and nature of Marketing functions of a business enterprise.
T.Y.B.Com.	VI	365 (E) Cost and Works Accounting. Special Paper I	The students get a thorough knowledge on the cost accounting principles and the methods of cost accounting.

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T.Y.B.Com.	VI	365 (H) Marketing Management-I	 Enable the students to understand the Principles of marketing management, market segmentation Product life cycle, pricing, branding, advertising, sales promotions, marketing research and
	1		CRM.

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Shri Eknathrao Sahadu Shete Arts, Comm. & Sci.Senior College Deolali Camp, Nashik Shete Ans. Composition Camp Nashik 422401

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Shri Eknathrao Sahadu Shete Arts, Commerce & Science College, Deolali Camp, Nashik

Matoshri Yamunabai Karandikar Sankul, Sv.No. 306/1A/4B/2,Barnes School Road, Deolali camp. Tal & Dist. Nashik-422401

Email: smbcollege@gmail.com

College ID: PU/AN/ACS/181/2019

Ph.No.: 0253-2973766

Department of Commerce-Academic Year 2022 - 2023

Programme Outcomes (PO) & Course Outcomes (CO) offered by the institution are stated and displayed on websites.

	Programme Outcome: Bcom
PO1	 Practical Exposure that would equip the students to face the challenges in the modern era in commerce and business.
PO2	 The course offers a number of values based and job oriented Skills to ensure that students become enabled on two feet for every challenging situation.
PO3	 Proficiency for completing various professional Courses like management, CA.,CMA.,CS.,MBA and Law
PO4	 Ability to recognize the role of businessman, entrepreneurs, consultants etc.
PO5	 Thorough knowledge of fundamentals of Commerce, Trade, Economics, Management etc.
PO6	 Expertise in way to contribute towards the development of new practices and procedures of Administration, Banking and finance, Entrepreneurship, Marketing, Insurance, Computers, Laws, Accountancy etc.
PO7	 Students become competent to demonstrate the role of Accountant, Manager, Advisor, Analyzer etc. in society and business.
PO8	 Learners will be able to do higher education and advance research in the field of commerce and finance.

Course Outcomes: Bcom

Class	Sem	Course Title with Sub. Code	Outcome
FYBCOM	I	112 Financial Accounting- I	 Students acquainted with the knowledge of various accounting concepts. Students become knowledgeable about accounting procedures, methods and techniques. Acquaint them with a practical approach to accounts writing by using software packages e.g. Tally ERP 19 SAP etc.

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Shri Eknathray Sanadu Shete Art's Comm. & Sci. Senior College, Deolali Camp, Nashik 1|Page

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Email: smbcollege@gmail.com College ID: PU/AN/ACS/181/2019 Ph.No.: 0253-2973766

FYBCOM	I	114 (A)	Students are prepared for competitive symminations by involvation the provide the symminations are prepared.
		Business Mathematics and Statistics - I	examinations by inculcating them with the concept of Simple interest, compound interest and the concept of EMI. Imparted the concept of shares and to calculate Dividend, concept of population and sample. They knew how to calculate various types of averages and variations along with the application of profit and loss in business.
FYBCOM	I	115 (A) Organisational Skill Developments - I	 On successful completion of this subject the students acquire the Knowledge about the various types of business organisations, office management and related practices.
FYBCOM	I	116 (C) Marketing and Salesmanship (Fundamentals of Marketing) - I	 On successful completion of this course the students should get the practical knowledge and the tactics in the marketing.
FYBCOM	п	112 Financial Accounting- II	 Students acquainted with the knowledge of various accounting concepts. Students become knowledgeable about accounting procedures, methods and techniques. Acquaint them with a practical approach to accounts writing by using software packages e.g. Tally ERP-9, SAP etc.
FYBCOM	п	114 (A) Business Mathematics and Statistics - II	 Students are prepared for competitive examinations by inculcating them with the concept of Simple interest, compound interest and the concept of EMI. Imparted the concept of shares and to calculate Dividend, concept of population and sample. They knew how to calculate various types of averages and variations along with the application of profit and loss in business.

Camp

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Co-Ordinator

Shri Eknathrao Sahadu Shete Arts, Comm. & Sci.Senior College Deolali Camp, Nashik Shri

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AFFILIATED TO SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE,

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FYBCOM	п	115 (A) Organisational Skill Developments - II	 On successful completion of this subject the students acquire the Knowledge about the various types of business organisations, office management and related practices.
FYBCOM	п	116 (B) Insurance And Transport – II	 Students become knowledgeable on various insurance aspects and the importance of transport facilities to a business.
FYBCO M	п	116 (C) Marketing and Salesmanship (Fundamentals of Marketing) - II	 On successful completion of this course the students should get the practical knowledge and the tactics in the marketing.
FYBCO M	п	116 (E) Business Environment & Entrepreneurship - II	 With this subject students are motivated to make their mind set for taking up entrepreneurship as a career.
S.Y.B.Com.	ш	241 Business Communication – I	 Students will be able to communicate in the language of business. Developing intellectual, personal and professional abilities through effective communication skills; ensuring high standard of behavioural attitude through literary subjects and shaping the students' socially responsible citizens.
S.Y.B.Com.	ш	242 Corporate Accounting - I	 To enable the students to be aware of Corporate Accounting in conformity with the provision of the Companies Act 2013. After the successful completion of the course the student should have a thorough knowledge on the accounting practice prevailing in the corporate world.
S.Y.B.Com.	ш	244 Business Management - I	 The students get the understanding of Principles & functions of Management, Process of decision making, and modern trends in management process.

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Shri Eknathrao Sahadu Shete Arts, Comm. & Sci.Senior College Deolali Camp, Nashik



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Art's Comm. & Sci. Senior College,
Deolali Camp, Nashik

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Email: smbcollege@gmail.com College ID: PU/AN/ACS/181/2019 Ph.No.: 0253-2973766

S.Y.B.Com.	ш	245 Elements of Company Law - I	Enlighten the students' knowledge on Companies Act 2013 and Secretarial practices.
S.Y.B.Com.	ш	236 (A) Business Administration - I	 Students are inculcated with the basic knowledge about various forms of business organisations, business environment and its implications thereon. They will be able to be aware of the latest trends in business.
S.Y.B.Com.	ш	236 (E) Cost and Works Accounting -I(Basic of COST Accounting) - I	 Enables the students to inculcate knowledge on Cost sheet, Material issues, Labour cost, Financial statement analysis, Budgeting etc.
S.Y.B.Com.	ш	236 (H) Marketing Management - I	 Enable the student to understand the Principles of marketing management, market segmentation Product life cycle, pricing, branding etc.
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S.Y.B.Com.	IV	244 Business Management - II	The students get the understanding of Principles & functions of Management, Process of decision making, and modern trends in management process.

Co-Ordinator

Shri Eknathrao Sahadu Shete Arts, Comm. & Sci.Senior College Deolali Camp, Nashik Deolali Nashik 422401

Principal

Shri Eknathrao Sahadu Shete Art's Comm. & Sci. Senior College, Deolaii Camp, Nashik

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College ID: PU/AN/ACS/181/2019

Γ.Y.B.Com.	VI	365 (H) Marketing Management-I	Enable the students to understand the Principles of marketing management, market segmentation Product life cycle, pricing, branding, advertising, sales promotions, marketing research and CRM.
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Co-Ordinator

Email: smbcollege@gmail.com

Shri Eknathrao Sahadu Shete Arts, Comm. & Sci.Senior College Deolali Camp, Nashik Deolali
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Principal
Shri Eknathrao Sahadu Shete
Art's Comm. & Sci. Senior College,
Deolali Camp, Nashik

Ph.No.: 0253-2973766

BACHELOR OF SCIENCE

Program Outcomes

- To acquire knowledge of physics by understanding basic concepts, fundamental principles and the scientific theories related to various physics phenomena and their relevance in the day-to-day life.
- To enhance the student's academic abilities, personal qualities and transferable skills which will give them an opportunity to develop as responsible citizens.
- To develop experimental skills to understand the laws and concepts of Physics.
- To acquire analytical and computational problem solving skills and to apply the theories learnt and the skills acquired to solve real time problems leading to research and development.
- To Perform job in various fields' viz. science, engineering, teaching, public service, etc. with scientific knowledge, precision, analytical mind, innovative thinking, clarity of thought and expression and systematic approach
- To produce graduates who excel in the competencies and values required for leadership to serve a rapidly evolving global community
- To endow the students with creative and analytical skills that will equip them to become entrepreneurs

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FIRSTYEAR BACHLOR OF SCINCE (CBCS 2019) **COURSE OUTCOMES**

Course Outcomes	By the end of this course, student will be able to:
PHY-112 Physics Principles and Applications	 To understand the general structure of atom, spectrum of hydrogen atom. To understand the atomic excitation and LASER principle s. 3. To understand the bonding mechanism and its different types To demonstrate an understanding of electromagnetic waves and its spectrum Understand the types and sources of electromagnetic waves and applications To demonstrate quantitative problem solving skills in all the topics covered.
PHY-121 Heat and Thermodynamics	 To understand the concept of the electric force, electric field and electric potential for stationary charges. Able to calculate electrostatic field and potential of charge distributions using Coulomb's law and Gauss's law. To understand the dielectric phenomenon and effect of electric field on dielectric c. 4) To Study magnetic field for steady currents using Biot-Savart and Ampere's Circuital laws 5) To study magnetic materials and its properties. 6) Demonstrate quantitative problem solving skills in all the topics covered.

Course Outcomes	By the end of this course, student will be able to:
PHY-122 Electricity and Magnetism	1) To understand the concept of the electric force, electric field and electric potential for stationary charges. 2) Able to calculate electrostatic field and potential of charge distributions using Coulomb's law and Gauss's law. 3) To understand the dielectric phenomenon and effect of electric field on dielectric 4) To Study magnetic field for steady currents using Biot-Savart and Ampere's Circuital laws. 5) To study magnetic materials and its properties 6) Demonstrate quantitative pupplem solving skills in all the
A Land	Principal
Co-Ordinator	Deolali Shri Eknathrao Sahadu Shete

Camp

Co-Ordinator IQAC Shri Eknathrao Sahadu Shete Arts, Comm. & Sci.Senior College Deolali Camp, Nashik

Shri Eknathrao Sahadu Shete Art's Comm. & Sci. Senior College,

Deolali Camp, Nashik

Mechanics and Properties of Matter	Title of the experiment (Credits-1.5) 1 Study and use of various measuring Instruments. 1. Vernier caliper 2. Micrometer Screw Gauge 3. Travelling Microscope 2 3 Study of Modulus of Rigidity of wire using Torsional Oscillations Determination of coefficient of Viscosity by Poiseuille's method 4 Determination of "Y" and "n" by flat spiral spring 5 Determination of "Y" by bending method. 6 Study of surface tension by Jaeger's method 7 Study of Poisson's ratio of rubber using rubber tube /rubber chord 8 Study of surface tension of liquid using Fergusson Method
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SECOND YEAR BACHLOR OFSCINCE (CBCS 2019)

Course Outcomes	By the end of this course, student will be able to:
PH211: MATHEMATICAL MEHODS IN PHYSICS	 Understand the complex algebra useful in physics courses Understand the concept of partial differentiation. Understand the role of partial differential equations in physics Understand vector algebra useful in mathematics and physics Understand the singular points of differential equation.
PH212: ELECTRONICS	 Apply laws of electrical circuits to different circuits. Understand the relations in electricity Understand the properties and working of transistors. Understand the functions of operational amplifiers. Design circuits using transistors and operational amplifiers. Understand the Boolean algebra and logic circuits.
PH222: OPTICS	 acquire the basic concepts of wave optics describe how light can constructively and destructively interfer explain why a light beam spreads out after passing through a aperture summarize the polarization characteristics of electromagneti waves appreciate the operation of many modern optical devices the utilize wave optics Understand optical phenomena such as polarisation birefringence, interference and diffraction in terms of the wave model. Analyse simple examples of interference and diffraction phenomena. be familiar with a range of equipment used in modern optics.
Co-Ordinator IQAC Shri Eknathrao Sahadu Shete Arts, Comm. & Sci.Senior College	Understand the physics and mathematics of oscillations. Solve the equations motion for sin Plaint male, damped, and forces oscillators and mathematics of oscillations. Shri Eknathrao Sahadu Shete Formulate These equations and mural scats enior beliegely side content in a variety of applications, Deolali Camp, Nashik

PH221: OSCILLATIONS, WAVES AND SOUND

- Describe oscillatory motion with graphs and equations, and use these descriptions to solve problems of oscillatory motion.
- · Explain oscillation in terms of energy exchange, giving various examples.
- Solve problems relating to undamped, damped and force oscillators and superposition of oscillations.
- Understand the mathematical description of travelling and standing waves.
- Recognise the one-dimensional classical wave equation and solutions to it.
- Calculate the phase velocity of a travelling wave.
- Explain the Doppler effect, and predict in qualitative terms the frequency change that will occur for a stationary and a moving observer.
- Define the decibel scale qualitatively, and give examples of sounds at various levels.
- Explain in qualitative terms how frequency, amplitude, and wave shape affect the pitch, intensity, and quality of tones produced by musical instruments.

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Camp Nashik 422401

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Shikshan Mandal Bhagur Arts, Science College, Deolali Camp, Nashik

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Email: smbcollege@gmail.com

College ID: PU/AN/ACS/181/2019

Ph.No.: 0253-2973766

Department of Chemistry- Academic Year 2019-20

Programme Outcomes (PO) & Course Outcomes (CO) offered by the institution are stated and displayed on websites.

	Programme Outcome: B. Sc.(Chemistry)			
PO1	The students are expected to understand the fundamentals, principles, and recent developments in the subject area.			
PO2	It is expected to inspire and boost interest of the students towards chemistry as the main subject			
PO3	To impart practical skills and learn basics behind experiments			
PO4	To prepare background for advanced and applied studies in chemistry			
PO5	To inculcate the scientific temperament in the students and outside the scientific community.			
PO6	To inculcate the scientific temperament in the students and outside the scientific community			
PO7	Use modern techniques, decent equipments and Chemistry softwares			

Outcomes: R Sc (CHEMISTRY)

Class	Semester	Course Title with Sub.	Outcome
F.Y.B.Sc	· I	Physical Chemistry CH-101	 Students will be able to apply thermodynamic principles to physical and chemical process Calculations of enthalpy, Bond energy, Bond dissociation energy, resonance energy Variation of enthalpy with temperature –Kirchoff's equation Third law of thermodynamic and its applications
F.Y.B.Sc	· I	Organic Chemistry CH-102	 The students are expected to understand the fundamentals, principles, and recent developments in the subject area. It is expected to inspire and boost interest of the students

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			1 1 ' the main subject
			towards chemistry as the main subject. To familiarize with current and recent
			developments in Chemistry.
			 To create foundation for research and
			development in Chemistry.
F.Y.B.Sc.	п	Inorganic Chemistry CH-201	 Various theories and principles applied to revel atomic structure Origin of quantum mechanics and its need to understand structure of hydrogen atom Schrodinger equation for hydrogen atom Explain rules for filling electrons in various orbitals- Aufbau's principle, Pauli exclusion principle, Hund's rule of maximum multiplicity Discuss electronic configuration of an atom and
			anomalous electronic configurations
F.Y.B.Sc.	п	Analytical Chemistry CH-202	 Calculations of mole, molar concentrations and various units of concentrations which will be helpful for preparation of solution. Relation between molecular formula and empirical formula. Basics of type determination, characteristic tests and classifications, reactions of different functional groups. Basics of chromatography and types of chromatography Theoretical background for Paper and Thin Layer Chromatography

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Email: smbcollege a gmail.com

College ID: PU/AN/ACS/181/2019

Ph.No.: 0253-2973766

Department of Chemistry- Academic Year 2020-21

Programme Outcomes (PO) & Course Outcomes (CO) offered by the institution are stated and displayed on websites.

	websites.			
	Programme Outcome: B. Sc.(Chemistry)			
PO1	The students are expected to understand the fundamentals, principles, and recent developments in the subject area.			
PO2	It is expected to inspire and boost interest of the students towards chemistry as the main subject			
PO3	To impart practical skills and learn basics behind experiments			
PO4	To prepare background for advanced and applied studies in chemistry			
PO5	To inculcate the scientific temperament in the students and outside the scientific community.			
PO6	To inculcate the scientific temperament in the students and outside the scientific community			
PO7	Use modern techniques, decent equipments and Chemistry softwares			

OS. D.S. (CHEMISTRY)

		Course Outcome	es: B.Sc. (CHEMISTRY)
Class	Semester	Course Title with Sub. Code	Outcome
F.Y.B.Sc	· I	Physical Chemistry CH-101	 Students will be able to apply thermodynamic principles to physical and chemical process Calculations of enthalpy, Bond energy, Bond dissociation energy, resonance energy Variation of enthalpy with temperature – Kirchoff's equation Third law of thermodynamic and its applications
F.Y.B.Sc	I	Organic Chemistry CH-102	 The students are expected to understand the fundamentals, principles, and recent developments in the subject area. It is expected to inspire and boost interest of
C	Ondia	Jes.	the students

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IQAC Shri Eknathrao Sahadu Shete Arts, Comm. & Sci.Senior College Deolali Camp, Nashik

		-	1 1 minter on the main embigat
			towards chemistry as the main subject.
			To familiarize with current and recent
			developments in Chemistry.
		l l	To create foundation for research and
			development in Chemistry.
		Inorganic Chemistry	Various theories and principles applied to
		CH-201	revel atomic structure
		C11-201	Origin of quantum mechanics and its need to
			understand structure of hydrogen atom
			 Schrodinger equation for hydrogen atom
			Explain rules for filling electrons in various
	п		orbitals- Aufbau's principle, Pauli exclusion
			principle, Hund's rule of maximum
V D Ca			multiplicity
Y.B.Sc.			Discuss electronic configuration of an atom
			and anomalous electronic configurations
			g to the second molar concentrations
	24	Analytical Chemistry	and various units of concentrations which will
		CH-202	be helpful for preparation of solution.
			Relation between molecular formula and
			empirical formula.
			Basics of type determination, characteristic
	**		tests and classifications, reactions of different
	II		functional groups.
4550			Basics of chromatography and types of
F.Y.B.Sc.			
			chromatography
			Theoretical background for Paper and Thin
			Layer Chromatography
		CH-301	Define / Explain concept of kinetics, terms
		Physical and	used, rate laws, molecularity, order, factors
		Analytical	affecting rate of reaction.
		Chemistry	Classification of Adsorption Isotherms, to derive
		Chemistry	isotherms
	1		Solve / discuss problems using theory.
			Define, explain and compare meaning of
	III		accuracy and precision.
	111		Apply the methods of expressing the errors in
			analysis from results
S.Y.B.Sc	;		Perform calculations involved in volumetric
			analysis
			Explain why indicator show colour change and
	1		nH range of colour change.
		GY1 000 T	Define terms related to molecular orbital theory
		CH-302: Inorganic and	English and apply I CAO principle for the
		Organic	formation of MO's from AO's.
S.Y.B.So	C	Chemistry	1. MOT to explain bonding in diatomic
D. I .D. 3	III		molecules other than explained in syllabus
		1	Define different terms related to the coordination
	& L	fe	
	Co-C	rdinator	
CI	Co-C	rdinator QAC	explain Werner's theory of coordination compounds compounds compounds compounds peolali peolali principal
Sh	Co-C	rdinator QAC ao Sahadu Shete	explain Werner's theory of coordination compounds the Arrange the mechanism of reactions involved. To peolali Deolali Principal
Sh Arts	Co-C hri Eknathr	Prdinator QAC ao Sahadu Shete Sci.Senior College amp, Nashik	

			correlate reagent and reactions
			• Explain / discuss synthesis of alkyl / aryl
			halides. To correlate reagent and reactions
			Able to differentiate between alcohols and
		=	phenols
		CH-303: Practical	 Verify theoretical principles experimentally.
		Chemistry-III	 Understand systematic methods of
		Chemistry-III	identification of
			substance by chemical methods
		_	 Perform organic and inorganic synthesis
		_	Set up the apparatus / prepare the solutions -
	III		properly for the designed experiments.
		4 .	 Perform the quantitative chemical analysis of
Y.B.Sc			substances explain principles behind it.
1.2.0			Systematic working skill in laboratory will be
			imparted in student.
	-	CH-401:	Discuss meaning of phase, component and
		Physical and	degree of freedom.
		Analytical	Derive of phase rule.
			 Define various terms, laws, differentiate ideal
		Chemistry	and no-ideal solutions.
			Explain distillation of liquid solutions from
			temperature –
			composition diagram. Solve problem by applying
			theory
	IV		• Explain / define different terms in conductometry
			• Explain / discuss conductometric titrations.
ND Co			Explain / define different terms in Colorimetry
S.Y.B.Sc			Apply colorimetric methods of analysis to real
			problem in analytical laboratory.
			• Solve problems based on theory / equations.
A			 Explain properties of adsorbents, ion exchange
			resins, etc.
		CH-402:	Isomerism in coordination complexes
			Apply principles of VBT to explain bonding in
		Inorganic and Organic	coordination compound of different geometries.
		Chemistry	• Explain principle of CFT.
			Explain spectrochemical series, tetragonal
		-	distortion / Jahn- Teller effect in Cu (II) Oh
	IV		complexes only.
			• Identify and draw the structures aldehydes,
S.Y.B.Sc			ketones amines and carboxylic acids.
0.1.		**	Explain / discuss synthesis of aldehydes,
			ketones amines and carboxylic acids.
			Perform inter conversion of functional groups.
		_	
	-	CH-403:	Verify theoretical principles experimentally
		Practical Chemistry-IV	Interpret the experimental data on the basis of
	B L	1	theoretical principles!
1		111	Systematic methods of
		The state of the s	chele And Stalle Stalle Stalle
	Co-C	Prdinator QAC	Deolali Camp Shri Eknathrad Sahadu Shete

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,	IV	 identification of substance by chemical methods. Write balanced equation for all the chemical reactions performed in the laboratory. Set up the apparatus properly for the designed
S.Y.B.Sc		 experiments. Perform the quantitative chemical analysis of substances and able to explain principles behind it.

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SHIKSHAN MANDAL BHAGUR'S AFFILIATED TO SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE,

Shikshan Mandal Bhagur Arts, Science College, Deolali Camp, Nashik

Matoshri Yamunabai Karandikar Sankul, Sv.No. 306/1A/4B/2, Barnes School Road, Deolali camp, Tal & Dist. Nashik-422401

Email: smbcollege@gmail.com

College ID: PU/AN/ACS/181/2019

Ph.No.: 0253-2973766

Department of Chemistry- Academic Year 2021-22

Programme Outcomes (PO) & Course Outcomes (CO) offered by the institution are stated and displayed on websites.

	Programme Outcome: B. Sc.(Chemistry)		
PO1	• The students are expected to understand the fundamentals, principles, and recent developments in the subject area.		
PO2	 It is expected to inspire and boost interest of the students towards chemistry as the main subject 		
PO3	To impart practical skills and learn basics behind experiments		
PO4	To prepare background for advanced and applied studies in chemistry		
PO5	To inculcate the scientific temperament in the students and outside the scientific community.		
PO6	To inculcate the scientific temperament in the students and outside the scientific community		
PO7	Use modern techniques, decent equipments and Chemistry softwares		

		Course Outcom	es: B.Sc. (CHEMISTRY)
Class	Semester	Course Title with Sub.	Outcome
F.Y.B.Sc	· I	Physical Chemistry CH-101	 Students will be able to apply thermodynamic principles to physical and chemical process Calculations of enthalpy, Bond energy, Bond dissociation energy, resonance energy Variation of enthalpy with temperature – Kirchoff's equation Third law of thermodynamic and its applications
F.Y.B.Sc	. I	Organic Chemistry CH-102	 The students are expected to understand the fundamentals, principles, and recent developments in the subject area. It is expected to inspire and boost interest of the students

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T			towards chemistry as the main subject.
	1		 To familiarize with current and recent
	V		developments in Chemistry.
			 To create foundation for research and
			development in Chemistry.
		Inorganic Chemistry	 Various theories and principles applied to
	6 3	CH-201	revel atomic structure
		C11-201	 Origin of quantum mechanics and its need to
1			understand structure of hydrogen atom
			 Schrodinger equation for hydrogen atom
			Explain rules for filling electrons in various
	п		orbitals- Aufbau's principle, Pauli exclusion
			principle, Hund's rule of maximum
Y.B.Sc.			multiplicity
Y.B.SC.			Di la tarria configuration of an atom
			and anomalous electronic configurations
			and anomalous electronic configurations
		Analytical Chemistry	Calculations of mole, molar concentrations
		CH-202	and various units of concentrations which will
			be helpful for preparation of solution.
			Relation between molecular formula and
			empirical formula.
			Basics of type determination, characteristic
	II		tests and classifications, reactions of different
			functional groups.
Y.B.Sc.			 Basics of chromatography and types of
			chromatography
			 Theoretical background for Paper and Thin
*			Laver Chromatography
		CH-301	Define / Explain concept of kinetics, terms used
T.		Physical and	rate laws, molecularity, order, factors affecting
		Analytical	rate of reaction.
		N. S.	 Classification of Adsorption Isotherms, to derive
		Chemistry	isotherms
			 Solve / discuss problems using theory.
			Define, explain and compare meaning of
	m		accuracy and precision.
	111		Apply the methods of expressing the errors in
			analysis from results
S.Y.B.Sc			Perform calculations involved in volumetric
			analysis.
			Explain why indicator show colour change and
			Explain why indicator show colour change
			 pH range of colour change. Define terms related to molecular orbital theory
		CH-302: Inorganic	• Define terms related to molecular orbital anerty
		and Organic	• Explain and apply LCAO principle for the
CVDC		Chemistry	formation of MO's from AO's.
S.Y.B.Sc	III		Apply MOT to explain bonding in diatomic
			molecules other than explained in syllabus
			Define different terms related to the coordination
			chemistry
			 Explain Werner's theory of coordination
	_1	10	aamnounds
le e	* L	Ju.	Sive the mechanism of reactions involved. To
		Ordinator	Shele Arts, Conna

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			correlate reagent and reactions
			Explain / discuss synthesis of alkyl / aryl halides. The second reactions The second reactions.
			To correlate reagent and reactions • Able to differentiate between alcohols and phenols
		CH-303: Practical	Verify theoretical principles experimentally. Understand systematic methods of
		Chemistry-III	 Understand systematic methods of identification
			substance by chemical methods
į.			B C
			a / propore the solutions -
	III		properly for the designed experiments.
			Perform the quantitative chemical analysis of
.Y.B.Sc			substances explain principles behind it.
CONTRACTOR SOCIETY			 Systematic working skill in laboratory will be
			imparted in student.
		CH-401:	Discuss meaning of phase, component and
		Physical and	degree of freedom.
		Analytical	Derive of phase rule.
		Chemistry	 Define various terms, laws, differentiate ideal
		Onombuj	and no-ideal solutions.
			 Explain distillation of liquid solutions from
			temperature –
			composition diagram. Solve problem by applying
			theory
	IV		Explain / define different terms in conductometry
			• Explain / discuss conductometric titrations.
S.Y.B.Sc			Explain / define different terms in Colorimetry
			 Apply colorimetric methods of analysis to real problem in analytical laboratory.
			g t the based on theory / equations
			 Solve problems based on theory / equations. Explain properties of adsorbents, ion exchange
			resins, etc.
		CH-402:	Isomerism in coordination complexes
		Inorganic and Organic	 Apply principles of VBT to explain bonding in
		Chemistry	coordination compound of different geometries.
		Chemistry	• Explain principle of CFT.
			Explain spectrochemical series, tetragonal
			distortion / Jahn- Teller effect in Cu (II) Oh
	IV		complexes only.
~ * * * * * * * *			Identify and draw the structures aldehydes,
S.Y.B.Sc			ketones amines and carboxylic acids.Explain / discuss synthesis of aldehydes,
			ketones, amines and carboxylic acids.
			Perform inter conversion of functional groups.
			• Lettorin inter conversion of tenescone Browle
		CH-403:	Verify theoretical principles experimentally
		Practical Chemistry-	Interpret the experimental data on the basis of
		IV	theoretical principles.
		1.4	• Understand systematic methods of
	B L	10	identification of

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			substance by chemical methods.
	IV		Write balanced equation for all the chemical
	- '		reactions performed in the laboratory.
V.D.C.			 Set up the apparatus properly for the designed
Y.B.Sc			
			experiments.
			Perform the quantitative chemical analysis of
1			substances and able to explain principles behind
			it.
		DSEC-I: CH-501:	Know historical of development of quantum
VD Ca	V	Control of the Contro	mechanics in chemistry.
Y.B.Sc		Physical Chemistry- I	Understand and explain the differences
			between classical and quantum mechanics.
		= ,=-	Understand the idea of wave function
			Understanding of De Broglie
			hypothesis and
			the uncertainty principle.
			the uncertainty principle.
			• Understanding the operators: Position,
		1	momentum and energy
		1	Solving Schrodinger equation for 1D, 2D and
			3D model
			• Physical interpretation of the ψ and ψ 2 and
			sketching the wave function
			Applications to conjugated systems, zero-point
			energy and quantum tunnelling, Numerical
			Problems
	-	DSEC-I: CH-502:	Define basic terms in gravimetry,
T.Y.B.S	V	Analytical Chemistry-	spectrophotometry, qualitative analysis and
1.1.0.0	~		parameters in instrumental analysis. Such as:
		I	Gravimetry, precipitation, solubility product,
			ionic product, common ion effect, precipitating
			agent washing of npt., drying and ignition of
			not linearity range, detection limit, precision,
			accuracy Sensitivity, Selectivity, Robustness
			and Ruggedness, electromagnetic radiations,
		*, -	spectrophotometry, Beers law, absorbance,
		1	transmittance, molar absorptivity,
			monochromator, wavelength of maximum
			absorbance, metal ligand ration, qualitative
			analysis, group reagent, dry tests, wet test,
			confirmatory test, precipitation,
			thermogravimetry, thermogram, percent wt.
			loss differential thermal analysis.
			a Identify important parameters in analytical
			processes or estimations. Example: minimum
1			analyte concentration in particular method,
			reagent concentration in particular analysis
			(gravimetry,
			spectrophotometry,
			thermogravimetry), reagent for particular analysi
			reaction condition to convert analyte into
			measurable form, drying and ignition
			temperature for ppt in gravimetry, heating rat
1			temperature for ppt in gravificity, heating the
(BL	A.	thermogravimetry, wavelength in spectrophotometry, group reagent, removal
	25.		spectrophotometry, group reagent, removal Principal Shu Eknathrao Sabadu Shata
	Co-Orc	inator //si	Principal
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		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
T.Y.B.Sc V	DSEC-I: CH-503: Physical Chemistry Practical - I	borate and phosphate in qualitative analysis, etc. Explain different principles involved in the gravimetry, spectrophotometry, parameters in instrumental analysis, qualitative analysis. Perform quantitative calculations depending uponequations student has studied in the theory. Furthermore, student should able to solve problems on the basis of theory. Discuss / Describe procedure for different types analyses included in the syllabus. Select particular method of analysis if analyte sample is given to him. Differentiate / distinguish / Compare among the different analytical terms, process and analytical methods. Demonstrate theoretical principles with help of practical. Design analytical procedure for given sample. Apply whatever theoretical principles he has studied in theory during practical session in laboratory. To determine the specific refractivity's of the given liquids. To determine the molecular refractivity of the given liquids. To determine the molar refraction of homologues methyl, ethyl and propyl alcohol and show the constancy contribution to the molar refraction by
		liquids.
		methyl, ethyl and propyl alcohol and show the
		constancy contribution to the molar refraction by -
		CH2 group.Determine the refractive index of a series of salt
		solutions and determine the concentration of a salt of unknown solution.
	: :	 Spectrophotometry and colorimetry. To titrate
		Cu2+ ions with EDTA photometrically. To determine the indicator constant of methyl red
		indicator.
		 To estimate of Fe3+ ions by thiocyanate method. Cobalt by using R-nitroso salt method.
		To determine the order of reaction for the
		oxidation of alcohol by potassium dichromate and potassium permanganate in acidic medium
		calorimetrically. • Simultaneous determination of Cu2+ and Ni2+
		ions by colorimetry/spectrophotometry method
		 Conductometry: Titration of a mixture of weak
		acid and strong acid with strong alkali. To determine the formality of citric acid in given
	-	fruit by titrating it against standard NaOH solution by
1		conductometric methody.
8	anad anad	Shete Ar
Co-Ordin	nator (%)	
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 To determine λ∞ of strong electrolyte (NaCl or KCl) and to verify Onsager equation. To estimate the amount of lead present in given solution of lead nitrate by conductometric titration with sodium sulphate. To determine the relative strength of monochloro acetic acid and acetic acid conductometrically. Viscosity: To determine the molecular weight of high polymer by using solutions of different concentrations. Explain electroneutrality principle and different types of pi bonding. Able to explain Nephelauxetic effect towards covalent bonding. Explain MOT of Octahedral complexes with sigma bonding. Able to explain Charge Transfer Spectra. Able to compare the different approaches to 	
sigma bonding. • Able to explain Charge Transfer Spectra. • Able to compare the different approaches to	T.Y.B.Sc
 bonding in Coordination compounds. To understand about inert and labile complexes and stability of complexes in aqueous solutions Classification of reactions of coordination compounds The basic mechanisms of ligand substitution reactions. Substitution reactions of square planer complexes. 	
 Tran's effect and applications of Trans effect Stereochemistry of mechanism Gain the knowledge of inorganic reaction mechanisms available in the literature to sol chemical problems. To know position of -block elements in peritable The meaning of term f-block elements, Innetransition elements, lanthanides, actinides. Electronic configuration of lanthanides and actinides. Oxidation states of lanthanides and actinide and common oxidation states. 4. Separation lanthanides by modern metho To know the general electronic configuration & electronic configuration of elements. To know trends in periodic properties of the 	
elements w.r.t. size of atom and ions,reactivity, catalytic act oxidation state, complex formation ability, cold magnetic properties, non-stoichiometry, densit melting point, boiling point	

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	V	DSEC-II: CH-505:	 Importance of chemical industry,
T.Y.B.Sc	•	Industrial Chemistry	 Meaning of the terms involved,
			 Comparison between batch and continuous
			 Concept of basic chemicals,
	1		 Their uses and manufacturing process
		_	 Importance of sugar industry,
			Manufacture of direct
			Consumption (plantation white) sugar with flow
			diagram.
			a division by various methods
1			Disc
			Chemistry of soap.
			 Raw materials required for soap manufacture
			 Dyes: introduction,
			 Dye intermediates,
			 Structural features of a dye;
			 Classification of dyes,
			 Synthesis, Structures, properties and
			applications of dyes
		DSEC-II: CH-506:	Gravimetric estimations: Gravimetric estimation
T.Y.B.Sc	\mathbf{V}	Inorganic Chemistry	of Fe as Fe2O3. Gravimetric estimation of Ba as
			BaSO4 using homogeneous precipitation method.
		Practical - I	 Gravimetric estimation of Nickel as Ni – DMG.
			 Analysis of sodium bicarbonate from mixture by
			thermal decomposition method.
			Determination of water of crystallization by
			thermal decomposition.
			 Analysis of Food/Pharmaceutical sample for ash
			and sulphated ash example-Aspirin.
			Inorganic preparation: Preparation of inorganic
		<u> </u>	complexes and spot tests for metal ions and
			ligands: Preparation of hexamminenickel(II)
	V.		chloride. Preparation of Potassium
			trioxalatoferrate(III).Preparation of Manganese
			(III) acetylacetonate. Preparation of
			tris(glycinato)nickelate(II), Preparation of
			Potassium dioxalatocuprate(II).
			 Inorganic qualitative Analysis: Inorganic
			qualitative analysis: simple water soluble mixture,
			mixtures containing borates and mixtures
		-	containing phosphates.
			 Limit test for iron, chloride and sulphate from
			pharmaceutical raw materials.
			Qualitative and confirmatory tests of inorganic
		**	toxicants of any four ions (Borate, copper,
			hypochlorite or nitrate or nitrite,
			Sb or Bi, Iodate, H2O2).
- "		DSEC-III: CH-507:	 Define and classify polynuclear and
T.Y.B.Sc	V	Organic Chemistry - I	hetreonuclear aromatic hydrocarbons
1.115.5		Organic Chemistry - 1	• Write the structure, synthesis of
			polynuclear and hetreonuclear
A			aromatic hydrocarbons.
3 1		180:	Meaning of active methy ene group
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00-	IQAC	N Sh	Shri Eknathrao Sahadu Shete Art's Comm. & Sci. Senior College,
	hrao Sat	nadu Shete	eolali Shri Eknathrao Sahadu Shete
		enior College	Art's Comm. & Sci. Senior College,
Deolali	Camp.	Nashik	Jashik Deolali Camp, Nashik

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	Reactivity of methylene group
	Synthetic applications ethyl acetoacetate and
	malonic ester.
	What is rearrangement reaction?
	 Different types of intermediate in
	rearrangement reactions
	• 1,1 and 1,2 elimination
	 E1, E2 and E1cB mechanism with evidences
	of these reactions 4
	 Understand stereochemistry by using models
	and learn reactivity of geometrical isomers
DSEC-III: CH-508:	The student will understanding of Cell types,
Y.B.Sc V DSEC-III. CI1-306. Chemistry of	 Difference between a bacterial cell, Plant cell
Biomolecules	
Biomorecares	and animal cell.
	 Biological composition and Organization of
	cell membrane, structure and function of
	various cell organelles of plant and animal cell
	Concepts of biomolecules, Bonds that link
	monomeric units to form.
	The student will understand the types of
	carbohydrates and their biochemical
	significance in living organisms, structure of carbohydrates and reactions of carbohydrates
	carbonydrates and reactions of carbonydrates
	with Glucose as example. Properties of
	carbohydratesThe student needs to know the types of lipids
	with examples, structure of lipids, properties of
	lipids
	Basic concepts of Endocrinology. Types of
	Endocrine glands and their hormones.
	Biochemical nature of hormones. Mechanism
	of action of lipophilic and hydrophilic
	hormones.
DSEC-III: CH-509:	To develop skills required in chemistry such a
Y.B.Sc V Organic Chemistry	the appropriate handling of apparatus and
Practical-I	chemicals.
1 Ideticul 1	 The student will learn the laboratory skills
	needed to design, safely conduct and interpret
	chemical research.
	To expose the students to an extent of
	experimental techniques using modern
	instrumentation.
	 The student will develop the ability to effectively communicate scientific information
	and research results in written and oral
	######################################
	formats. • Perform the quantitative chemical analysis of
	binary mixture, explain principles behind it.
	Separate, purify and analyse binary water
	Separate, purity and analyse office,
	insoluble mixfilre
	insoluble mixture. Separate apprify and analyse binary water-
	 Separate, purify and analyse binary water-
Co-Ordinator IQAC	 Separate, purify and analyse binary water- soluble maxture.

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	1		drying and
			recrystallization by various method.
			Systematic working skill in laboratory will be
		1	imparted in student.
			Learn the basic principles of green and
			sustainable chemistry.
	\ 		 Synthesis of various organic compounds
			through greener approach.
	V	CH-510 (B) : Polymer	History of polymers. Pics a laterage simple compounds and
T.Y.B.Sc	38.0	Chemistry	 Difference between simple compounds and
			polymer.
			 Names of polymers.
		_	 Various ways of nomenclature.
			 Difference between natural, synthetic, organic and inorganic
		-	polymers.
		_	Terms-Monomer, Polymer, Polymerization,
			Degree of polymerization, Functionality,
			Number
			average, Weight average molecular weight.
			 Mechanisms of polymerization.
			 Polymerization techniques.
			 Uses & properties of polymers.
			 Role of polymer industry in the economy.
			Advantages of polymers
		CH-511 (A):	Importance and conservation of environment
T.Y.B.Sc	V		Importance of biogeochemical cycles
1.1.0.30		Environmental	Water resources
		Chemistry	Hydrological Cycle
			Organic and inorganic pollutants
			Water quality parameters
		DOEG DI CII (01 .	- 1 1 11 Explanation of
T. 37	VI	DSEC-IV: CH-601:	• Electrochemical cells: Explanation of Daniell cell, Conventions to
T.Y.		Physical Chemistry-II	represent electrochemical cells
B.Sc			Thermodynamic conditions of reversible cell,
			Explanations of reversible and irreversible
			electrochemical cell with suitable example,
			EMF of electrochemical cell and its
			measurement.
			D' ' ish hatryson omystalline and
			amorphous solids / anisotropic and isotropic
			solids.
			when the mark
			• Explain the term crystallography and laws of crystallography.
			Weiss and Millers Indices, determination of
			Miller Indices
			RadioactivityTypes and properties of radiations: alpha, beta
			and gammaDetection and Measurement of Radioactivity:
			Cloud chamber Ionization Chamber, Geiger-
	(a)		Muller Counter, Scintillation Counter, Film
(5	L-		
Z		76.	Badges.
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			Meaning of the terms-Solution,
TVD C.	VI	DSEC-IV: CH-602:	Meaning of the terms-Solution, electrolytes, nonelectrolytes and
Γ.Y.B.Sc		Physical Chemistry-	colligative properties,
		III	Lowering of vapour pressure of solvent in
			solution.
1			• Factors affecting on solid state reactions,
			Rate laws for reactions in solid state
			 Applying rate laws for solid state reactions
			 Cohesive Energy of ionic crystals based on
			coulomb's law and Born Haber Cycle
			 Correspondence between energy levels in the
			atom and energy bands in solid
			 Band structure in solids – Na, Ca and diamond
			 History of polymers.
			 Classification of polymers
			Chemical bonding & Molecular forces in
		_	Polymer
			Molecular weight of polymers
			n .: 1 : :C of nolymor molecular
			Practical significance of polyfiler inforcedian weights
		DODG IV. CII 602 .	To determine the PKa value of given
T.Y.B.Sc	VI	DSEC-IV: CH-603:	monobasic weak acid by potentiometric
1.1.5.50		Physical Chemistry	titration.
		Practical-II	To determine the formal redox potential of
			Fe2+/ Fe3+ system potentiometrically.
	V.		• To determine the amount of NaCl in the given
			solution by potentiometric titration against
		143	silver nitrate.
			To determine the solubility product and
			solubility of AgCl potentiometrically using
			chemical cell.
			Estimate the amount of Cl-, Br- and I- in
			given unknown halide mixture by titrating it
			against standard AgNO3 solution (mixture of
		-	
ľ			any two ions).To prepare standard 0.2 M Na2HPO4 and 0.1
			M Citric acid solution, hence prepare four
			different buffer solutions using them.
			Determine the pH value of these and unknown
			solution.
			T 1-ting the composition of Zinc
			ferrocyanide complex potentiometrically
			To determine the standard electrode potentials
		A	of Cu and Ag electrodes and to determine the
			EMF of a concentration cell.
1			m 1 1 in the degree of hydrolysis of
			aniline hydrochloride.
			To determine the dissociation constant of oxal
			pH-metric titration with strong base.
			Determination of Pka of given weak acid by
			pH metry titration with strong base
			To determine the shid and base dissociation
*	1	10	rts, co. constant of an arming acid and hence the
500-50		ator	Collisiant of an arrang dots and rest
Co	-Ordin	ator	Principal
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T.Y.B.Sc	71	DSEC-V: CH-604: Inorganic Chemistry - II	 isoelectric point of an acid. pH metric titration of strong acid against strong base by pH measurement and hence determine the concentration and strength of strong acid. To determine plateau voltage of the given G M counter. To determine the resolving time of GM counter. To determine Emax of beta particle. To understand M-C bond and to define organometallic compounds To define organometallic chemistry To understand the multiple bonding due to CO ligand. To know methods of synthesis of binary metal carbonyls Understand the phenomenon of catalysis, its basic
			 principles and terminologies. Define and differentiate homogeneous and heterogeneous catalysis. Give examples and brief account of homogeneous catalysts. Understand the essential properties of homogeneous catalysts-Give the catalytic reactions Identify the biological role of inorganic ions &
			 compounds. Know the abundance of elements in living system and earth crust. Give the classification of metals as enzymatic and non- enzymatic. Understand the role of metals in non-enzymatic processes.
T.Y.B.Sc	VI	DSEC-V: CH-605: Inorganic Chemistry - III	 Student will learn the concept of acid base and their theories. They will also come to know different properties of acids and bases. Strength of various types acids. How acid and base strengths get affected in non-aqueous solvents. Draw the simple cubic, BCC and FCC structures. Identify the C.N. of an ion in ionic solid. dentify the type of void. Know the effect of radius ratio in determining the crystal structure.
*		Jus;	 Be able to define Pauling's univalent radius and crystal radius. Different Zeolite Framework Types and their classification
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TVR So	VI	DSEC-V: CH-606:	 Stabilization of Nanoparticles in solution Properties and Application of Nanoparticles Know about carbon nanotube and its application Analysis of Phosphate (PO43-) from Fertilizer. Analysis of Iodine from Iodized salt.
r.Y.B.Sc		Inorganic Chemistry Practical-II	 Strength of medicinal H2O2. Analysis of Calcium from milk powder. Analysis of Cu from Cu-Fungicide. Estimation of Na by flame photometry by calibration curve method. Estimation of Na by flame photometry by regression method. Estimation of K by flame photometry by calibration curve method. Estimation of K by flame photometry by regression method. Purification of water using cation/anion exchange resin and analysis by qualitative analysis /conductometry. Synthesis of Silver nanoparticles. Verification of periodic trends using solubility of alkaline earth metal hydroxides Ca(OH)2, Mg(OH)2, Cr(OH)2, Ba(OH)2. Synthesis of amine complexes of Ni(II) and its
			ligand exchange reaction (bidentate ligands like acac, DMG, Glycine) by substitution method. OR Determination of the Metal to ligand ratio (M: L) in complexes. Solvent free microwave assisted one pot synthesis of pthalocynin copper (II) complex. OR Fenton reaction: Degradation of H2O2 using Fe catalyst.
T.Y.B.Sc	VI	DSEC-VI: CH-607: Organic Chemistry-II	 Students will learn the interaction of radiations with matter. They will understand different regions of electromagnetic radiations. They will know different wave parameters Students will learn the principle of mass spectroscopy, its instrumentation and nature of mass spectrum.
			 Students will understand the principle of UV spectroscopy and the nature of UV spectrum. They will learn types of electronic excitations. Students will understand the principle of NMR spectroscopy and will understand various terms used in NMR spectroscopy. They will learn measurement of chemical shift and
	1 =	4	coupling constants. Students will be able to determine the

Co-Ordinator IQAC Shri Eknathrao Sahadu Shete Arts, Comm. & Sci.Senior College Deolali Camp, Nashik Principal
Shri Eknathrao Sahadu Shete
Art's Comm. & Sci. Senior College,
Deolali Camp, Nashik

Deolali Camp Nashik

Line Sall

T.Y.B.Sc Organic Chemistry-III Organic Chemistry-III Organic Chemistry-III equivalence, FGI, TM, One group disconnection, Retrosynthesis. To study Chemistry of reactive intermediates (carbocations, carbanions, free radicals, carbenes, nitrenes, betazynes) Wolff rearrangement (Step up), Hofmann rearrangement (Step down), Simmons-Smith reaction, Michael reaction, Functional group interconversions and structural problems using chemical reactions. To understand the Oxidation, reduction and oxidizing, reducing agents Explain "fingerprint region" of an infrared spectrum can used in the identification of an unknown compound. Identify the functional group or groups present in a compound. Identify the functional group or groups present in a compound. Identify the broad regions of the infrared spectrum in which occur absorptions caused by N-H, C-H, and O-H, C=C and C=N, C=O, C=N, and C=C. Understand use NMR spectra to determine the structures of compounds. Interpret integration of NMR spectra Calculate coupling constants from 1 H NMR spectra. Interpret elemental analysis technique. Practical knowledge of handling chemicals. Achieve the practical skills required to Saponification value of oil. Determine the molecular weight of given tribasic acids Apply the principles of extraction Understand the equipment for extraction Understand the equipment for extraction Defines the basic parameter of chromatography Explain the processes of a chromatography analysis Describes the types and materials of column. Explains the types of mobile phase and elution T.Y. UI DSEC-VI: CH-610 (A): T.Y. B.Sc				 structure of simple organic compounds on the basis of Spectral data such as λ max values, IR frequencies, chemical shift (δ values
T. Y. B.Sc VI Organic Chemistry Practical-II Explain "fingerprint region" of an infrared spectrum can used in the identification of an unknown compound. Identify the functional group or groups present in a compound. Identify the broad regions of the infrared spectrum in which occur absorptions caused by N−H, C−H, and O−H, C≡C and C≡N, C=O, C=N, and C≡C. Understand use NMR spectra to determine the structures of compounds. Interpret integration of NMR spectra Calculate coupling constants from 1 H NMR spectra. Interpret elemental analysis technique. Practical knowledge of handling chemicals. Achieve the practical skills required to estimations of glucose and glycine. Achieve the practical skills required to Saponification value of oil. Determine the molecular weight of given tribasic acids Apply the principles of extraction Understand the equipment for extraction Understand the equipment for extraction Defines the basic parameter of chromatography analysis Describes the types and materials of column. Explains the types of mobile phase and elution of the soil.	T.Y.B.Sc	VI		equivalence, FGI, TM, One group disconnection, Retrosynthesis. To study Chemistry of reactive intermediates (carbocations, carbanions, free radicals, carbenes, nitrenes, benzynes) Wolff rearrangement (Step up), Hofmann rearrangement (Step down), Simmons-Smith reaction, Michael reaction, Wittig reaction and McMurry reaction, Diels-Alder reaction, Functional group interconversions and structural problems using chemical reactions. To understand the Oxidation ,reduction and
Understand use NMR spectra to determine the structures of compounds. Interpret integration of NMR spectra Calculate coupling constants from 1 H NMR spectra. Interpret elemental analysis technique. Practical knowledge of handling chemicals. Achieve the practical skills required to estimations of glucose and glycine. Achieve the practical skills required to Saponification value of oil. Determine the molecular weight of given tribasic acids Apply the principles of extraction Understand the equipment for extraction Defines the basic parameter of chromatography Explain the processes of a chromatography analysis Describes the types and materials of column. Explains the types of mobile phase and elution T. Y. UI DSEC-VI: CH-610 (A): T. Y. DSEC-VI: chefore the soil and soil properties and their impact on plant growth, the classification of the soil.		VI	Organic Chemistry	 Explain "fingerprint region" of an infrared spectrum can used in the identification of an unknown compound. Identify the functional group or groups present in a compound. Identify the broad regions of the infrared spectrum in which occur absorptions caused by N-H, C-H, and O-H, C=C and C=N, C=O,
 Achieve the practical skills required to Saponification value of oil. Determine the molecular weight of given tribasic acids Apply the principles of extraction Understand the equipment for extraction Defines the basic parameter of chromatography Explain the processes of a chromatography analysis Describes the types and materials of column. Explains the types of mobile phase and elution T. Y. B.Sc DSEC-VI: CH-610 To understand various components of soil and soil properties and their impact on plant growth, the classification of the soil. 				 Understand use NMR spectra to determine the structures of compounds. Interpret integration of NMR spectra Calculate coupling constants from 1 H NMR spectra. Interpret elemental analysis technique. Practical knowledge of handling chemicals. Achieve the practical skills required to
T. Y. (A): soil properties and their impact on plant growth, the classification of the soil.				 Achieve the practical skills required to Saponification value of oil. Determine the molecular weight of given tribasic acids Apply the principles of extraction Understand the equipment for extraction Defines the basic parameter of chromatography Explain the processes of a chromatography analysis Describes the types and materials of column. Explains the types of mobile phase and elution.
Co-Ordinator Agrochemicals IQAC Shri Eknathrao Sahadu Shete Arts Company Soli Sarian College Shri Eknathrao Sahadu Shete		* L	(A):	 To understand various components of soil and soil properties and their impact on plant growth, the classification of the soil. Explores the problems and potentials of soil

			 and decide the most appropriate treatment for land use. The Reclamation and management of soil physical and chemical constraints. Useful in making decisions on nutrient dose, choice of fertilizers and method of application etc. practiced in crop production. Advanced analytical and instrumentation methods in the estimation of soil. Various Nutrient management concepts and nutrient use efficiencies of major and micronutrients and enhancement techniques. Proper understanding of chemistry of pesticides will be inculcated among the students, different pesticides, their nature and, mode of action and their fate in soil so as to monitor their effect on the environment.
T. Y. B.Sc	VI	DSEC-VI: CH- 611(A): Analytical Chemistry- II	 Define basic terms in solvent extraction, basics of chromatography, HPLC, GC, and AAS and AES. The solvent extraction, aqueous and organic phase, distribution ratio and coefficient, percent extraction, ion association complex, theoretical plate, HETP, retention time, selectivity, resolution, stationary phase, normal and reverse phase, ion exchange, column efficiency, carrier gas, split and spitless injection, packed column, tubular column. Atomic absorption and emission spectroscopy, electronic excitation in atoms, nebulization, atomization, reduction of metal ions in flame, absorbance by atoms in flame, flame atomizers, furnace atomizers, interference in AES and FES, HCL, hydride generator, etc. Identify important parameters in analytical processes or
Shri Ekna Arts, Comm	Ordina IQAC athrao Sah n. & Sci.Se li Camp,	adu Shete Deola	Shri Eknathrao Sahadu Shete

			 upon equations students has studied in the theory. Furthermore, student should able to solve problems on the basis of theory. Differentiate / distinguish / compare among the different analytical terms, process and analytical methods. Demonstrate / explain theoretical principles with help of practical and design analytical procedure for given sample.
T. Y. B.Sc	VI	DSEC-VI: CH- 611(B): CHEMISTRY OF COSMETICS & PERFUMES	 Prepare hair dyes, hair spray and shampoos. Prepare lotions, lipsticks and talcum powder. Prepare creams antiperspirants and artificial flavours. Understand the chemistry of essential oils.

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Arts, Comm. & Sci.Senior College
Deoiali Camp, Nashik

Camp Nashik 422401

Principal

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Shri Eknathrao Sahadu Shete Arts, Commerce & Science College, Deolali Camp, Nashik

Matoshri Yamunabai Karandikar Sankul, Sv.No. 306/1A/4B/2, Barnes School Road, Deolali camp, Tal & Dist. Nashik-422401

Email: smbcollege@gmail.com

College ID: PU/AN/ACS/181/2019

Ph.No.: 0253-2973766

Department of Chemistry- Academic Year 2022-23

Programme Outcomes (PO) & Course Outcomes (CO) offered by the institution are stated and displayed on websites.

	websites.		
	Programme Outcome: B. Sc.(Chemistry)		
PO1	The students are expected to understand the fundamentals, principles, and recent developments in the subject area.		
PO2	It is expected to inspire and boost interest of the students towards chemistry as the main subject		
PO3	To impart practical skills and learn basics behind experiments		
PO4	To prepare background for advanced and applied studies in chemistry		
PO5	To inculcate the scientific temperament in the students and outside the scientific community.		
PO6	To inculcate the scientific temperament in the students and outside the scientific community		
PO7	Use modern techniques, decent equipments and Chemistry softwares		

Course Outcomes: B.Sc. (CHEMISTRY)

Class	Semester	Course Title with Sub.	Outcome
F.Y.B.Sc	· I	Physical Chemistry CH-101	 Students will be able to apply thermodynamic principles to physical and chemical process Calculations of enthalpy, Bond energy, Bond dissociation energy, resonance energy Variation of enthalpy with temperature – Kirchoff's equation Third law of thermodynamic and its applications
F.Y.B.Sc	. I	Organic Chemistry CH-102	 The students are expected to understand the fundamentals, principles, and recent developments in the subject area. It is expected to inspire and boost interest of the students

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Camp Nashik

			towards chemistry as the main subject.
		75	To familiarize with current and recent
			developments in Chemistry.
			To create foundation for research and
			To create foundation for research and
			development in Chemistry.
		Inorganic Chemistry	Various theories and principles applied to
· ·		CH-201	revel atomic structure
1		011 20 2	Origin of quantum mechanics and its need to
			understand structure of hydrogen atom
	1		Schrodinger equation for hydrogen atom
	1		Explain rules for filling electrons in various
\mathbf{r}	I I		orbitals- Aufbau's principle, Pauli exclusion
			principle, Hund's rule of maximum
Y.B.Sc.			multiplicity
I.D.Sc.			Discuss electronic configuration of an atom
			and anomalous electronic configurations
			Calculations of mole, molar concentrations and
		Analytical Chemistry	various units of concentrations which will be
		CH-202	helpful for preparation of solution.
			Relation between molecular formula and
			empirical formula.
			Basics of type determination, characteristic
			tests and classifications, reactions of different
	II		functional groups.
			Basics of chromatography and types
Y.B.Sc.			
		-	 chromatography Theoretical background for Paper and Thir
			• Theoretical background for rupor and
			Layer Chromatography
		CH-301	Define / Explain concept of kinetics, terms used
		Physical and	rate laws, molecularity, order, factors affecting
		Analytical	rate of reaction. Classification of Adsorption Isotherms, to deriv
		Chemistry	
		Chomisary	isotherms
			Solve / discuss problems using theory.
		4.0	Define, explain and compare meaning of
	Ш		accuracy and precision.
			 Apply the methods of expressing the errors in
			analysis from results
S.Y.B.So			Perform calculations involved in volumetric
			analysis.
			Explain why indicator show colour change and
			nH range of colour change.
	-	CH-302: Inorganic	Define terms related to molecular orbital theory
500		and Organic	 Explain and apply LCAO principle for the
S.Y.B.S			formation of MO's from AO's.
	C	Chemistry	Apply MOT to explain bonding in diatomic
	111		molecules other than explained in syllabus
			Define different terms related to the coordination
			chemistry
1			Explain Werner's theory of coordination
			Explain weller street, or services
	1	A	Campounds Give the mechanism of reactions involved. To Principal Campounds Sprincipal Sprincipal
X	1 -	110	C' the me all builded the reactions involved. IU

Deolali Camp Nashik 422401

	DSEC II. CII 505	
T.Y.B.Sc V	DSEC-II: CH-505:	Importance of chemical industry,
	Industrial Chemistry	Weaning of the terms involved
		Comparison between batch and continued
	 	Concept of basic chemicals
		I heir uses and manufacturing process
		importance of sugar industry
		• Manufacture of direct
		Consumption (plantation white) sugar with flow diagram.
		diagram.
	1	• Cane juice extraction by various methods
	50	Difficient types of soan products
		Chemistry of soan.
		• Raw materials required for soan manufacture
		byes. introduction,
	=	 Dye intermediates.
		Structural features of a dve-
		 Classification of dves
		 Synthesis, Structures, properties and
TVD . V	DSEC-II: CH-506:	applications of dves
T.Y.B.Sc	Inorganic Chemistry	• Gravimetric estimations: Gravimetric estimation of
	Practical - I	as 16203. (Travimetric estimation of p
	riactical - 1	dollig Holliggeneous preginitation
		Stavimente estilliation of Nickel as XI: Divis
		Alialysis of sodium hicarbonate from
		Determination of water of crystallization by thermal decomposition
		The second decomposition
		Analysis of Food/Pharmaceutical sample for ash and sulphated ash exemple.
		Daipilated asii Examinie Achiem
		• Inorganic preparation: Preparation of inorganic complexes and spot tests for more than
		complexes and spot tests for metal ions and ligands: Preparation of hexamminenickel(II) chloride.
		1 reparation of
		trioxalatoferrate(III).Preparation of Manganese
		acctylactionate. Preparation
		tris(glycinato)nickelate(II) Prangration
		Potassium dioxalatocuprate(II).
		Inorganic qualitative Analysis I
	-	qualitative analysis: simple water soluble mixture.
		Collialities horates and
		containing phosphates.
		Limit test for iron, chloride and sulphate from pharmaceutical raw materials.
		Oualitative and confirmed
		Qualitative and confirmatory tests of inorganic toxicants of any four ices.
		toxicants of any four ions (Borate, copper, hypochlorite or nitrate or nitrite,
	Dang vii	Sb or Bi, Iodate, H2O2).
T.Y.B.Sc V	DSEC-III: CH-507:	Define and classify polynuclear and
	Organic Chemistry - I	hetreonuclear aromatic hydrocarbons.
		• Write the structure synthesis of
354	1 .	polynualear I and hater
	10.	aromatic hydrocarbons.
Co-Ordinat	Or che	aromatic hydrocarbons. Meaning of active metaylene group
Shri Eknathraa	adus	olali Shri Eknathrao Sanadu Shete
	or College	Shri Eknathrao Sahadu Shete
Deolali Camp, Na	ishik Callege Na	shik Art's Comm. & Sci. Senior College,
	422	Deolali Camp, Nashik
	13	ROLL

T.Y.B.Sc V	DSEC-III: CH-508: Chemistry of Biomolecules	 Reactivity of methylene group Synthetic applications ethyl acetoacetate and malonic ester. What is rearrangement reaction? Different types of intermediate in rearrangement reactions 1,1 and 1,2 elimination E1, E2 and E1cB mechanism with evidences of these reactions 4 Understand stereochemistry by using models and learn reactivity of geometrical isomers The student will understanding of Cell types, Difference between a bacterial cell, Plant cell and animal cell. Biological composition and Organization of cell membrane, structure and function of various cell organelles of plant and animal cell. Concepts of biomolecules, Bonds that link monomeric units to form. The student will understand the types of carbohydrates and their biochemical significance in living organisms, structure of carbohydrates and reactions of carbohydrates with Glucose as example. Properties of carbohydrates The student needs to know the types of lipids with examples, structure of lipids, properties of lipids
T.Y.B.Sc V	DSEC-III: CH-509: Organic Chemistry Practical-I	 Basic concepts of Endocrinology. Types of Endocrine glands and their hormones. Biochemical nature of hormones. Mechanism of action of lipophilic and hydrophilic hormones. To develop skills required in chemistry such as the appropriate handling of apparatus and chemicals. The student will learn the laboratory skills needed to design, safely conduct and interpret chemical research. To expose the students to an extent of experimental techniques using modern instrumentation. The student will develop the ability to effectively communicate scientific information and research results in written and oral formats. Perform the quantitative chemical analysis of binary mixture explain principle left.
Co-Ordinator IQAC Eknathrao Sahadu Somm. & Sci.Senior Geolali Camp, Nash	Shete Dec	binary mixture, explain principles behind it. Separate, purify and analyse binary water insoluble mixture. Separate, purify and analyse binary water-soluble mixture. Understand the techniques involving and team and separate purify and analyse binary water-soluble mixture. Principal Shri Eknathrao Sahadu Shete Art's Comm. & Sci. Sepior College

Shi Arts, Deolali Camp, Nashik

Art's Comm. & Sci. Senior College, Deolali Camp. Nashik

e'			
			 Application of zeolites Various methods of nanoparticle synthesis Stabilization of Nanoparticles in solution Properties and Application of Nanoparticles Know about early
T.Y.B.Sc	VI	DSEC-V: CH-606: Inorganic Chemistry Practical-II	 Know about carbon nanotube and its application Analysis of Phosphate (PO43-) from Fertilizer. Analysis of Iodine from Iodized salt. Strength of medicinal H2O2.
	3		 Analysis of Calcium from milk powder. Analysis of Cu from Cu-Fungicide
			 Estimation of Na by flame photometry by calibration curve method. Estimation of Na by flame photometry by regression method.
			Estimation of K by flame photometry by calibration curve method
			 Estimation of K by flame photometry by regression method. Purification of water using cation/anion exchange region.
			analysis /conductometry. Synthesis of Silver nanoparticles
			 Synthesis of ZnO nanoparticles. Verification of periodic trends using solubility of alkaline earth metal hydroxides Co(OT)2
			 Synthesis of amine complexes of Ni(II) and its ligand exchange reaction (bidentate ligands like acac, DMG, Glycine) by substitution and its
			OR Determination of the Metal to ligand ratio (M:L) in complexes. Solvent free microwave assisted one pot synthesis of pthalocynin copper (II) complex. OR Fenton reaction:
VI		DSEC-VI: CH-607:	Degradation of H2O2 using Fe catalyst
T.Y.B.Sc VI		Organic Chemistry-II	with matter. They will understand different regions of electromagnetic radiations. They will know different wave parameters
			spectroscopy, its instrumentation and nature of mass spectrum.
			• Students will understand the principle of UV spectroscopy and the nature of UV spectrum. They will learn types of electronic excitations.
			Students will understand the principle of NMR spectroscopy and will understand various terms used in NMR spectroscopy. They will
8	July	2	measurement of chemical shift and coupling constants. Students will be able to determine the structure
Co-Ordin			of simple organic compounds on the basis of
Eknathrao Sa	hadu Shet	a	Principal

*			 Spectral data such as λ max values, frequencies, chemical shift (δ values
		Deed in on the	
T.Y.B.	ScVI	DSEC-VI: CH-608: Organic Chemistry-III	 Study the Disconnection, Synthons, Synthetic equivalence, FGI, TM, One group disconnection, Retrosynthesis. To study Chemistry of reactive intermediates (carbocations, carbanions, free radicals, carbenes, nitrenes, benzynes) Wolff rearrangement (Step up), Hofmann rearrangement (Step down), Simmons-Smith reaction, Michael reaction, Wittig reaction and McMurry reaction, Diels-Alder reaction, Functional group interconversions and structural problems using chemical reactions. To understand the Oxidation , reduction and oxidizing and interconversion and oxidizi
T. Y.	VI	DSEC-VI: CH-609:	oxidizing, reducing agents
B.Sc		Organic Chemistry	• Explain "fingerprint region" of an infrared
1.50		Practical-II	spectrum can used in the identification of an unknown compound.
			Identify the functional group or groups present in a compound.
			in a compound.
			• Identify the broad regions of the information
		1.45	spectrum in which occur absorptions caused by N-H, C-H, and O-H, C=C and C=N, C=O, C=N, and C=C.
			 Understand use NMR spectra to determine the structures of compounds. Interpret integration of NMR spectra Calculate coupling constants from 1 H NMR spectra. Interpret elemental analysis technique. Practical knowledge of handling chemicals. Achieve the practical skills required to estimations of glucose and glycine.
			 Achieve the practical skills required to Saponification value of oil. Determine the molecular weight of given tribasic acids Apply the principles of extraction Understand the equipment for extraction Defines the basic parameter of chromatography Explain the processes of a chromatography analysis Describes the types and materials of column
T. Y. VI	I	OSEC-VI: CH-610	Explains the types of mobile phase and elution
B.Sc	Do	(A):	soil properties and their impact on plant growth
	The Contract of the Contract o	Chemistry of Soil and	the classification of the soil.
	dinator	Agrochemicals	Arts, plores the problems and potentials of soil and
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Commin. & Se	I. Saniar Ca	llege light of	anik Shri Eknathara Shri
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		The state of the s	Declali Camp, Nashik

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Shri Eknathrao Sahadu Shete Arts, Commerce & Science College, Deolali Camp, Nashik

Matoshri Yamunabai Karandikar Sankul, Sv.No. 306/1A/4B/2,Barnes School Road, Deolali camp, Tal & Dist.

Email: smbcollege@gmail.com

College ID: PU/AN/ACS/181/2019

Ph.No.: 0253-2973766

Department of Chemistry- Academic Year 2023-24

Programme Outcomes (PO) & Course Outcomes (CO) offered by the institution are stated and displayed on

	websites.		
	Programme Outcome: B. Sc.(Chemistry)		
PO1	 The students are expected to understand the fundamentals, principles, and recent developments in the subject area. 		
PO2	It is expected to inspire and boost interest of the students towards chemistry as the main subject		
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PO4	To prepare background for advanced and applied studies in chemistry		
PO5	To inculcate the scientific temperament in the students and outside the scientific community.		
PO6	To inculcate the scientific temperament in the students and outside the scientific community		
PO7	Use modern techniques, decent equipments and Chemistry softwares		

Class	Semester	Course Title with Sub.	es: B.Sc. (CHEMISTRY) Outcome
F.Y.B.Sc.	I	Physical Chemistry CH-101	 Students will be able to apply thermodynamic principles to physical and chemical process Calculations of enthalpy, Bond energy, Bond dissociation energy, resonance energy Variation of enthalpy with temperature – Kirchoff's equation
F.Y.B.Sc.	I	Organic Chemistry CH-102	Third law of thermodynamic and its applications The students are expected to understand the fundamentals, principles, and recent developments in the subject area. It is expected to inspire and boost interest of the students

Shri Eknathrao Sahadu Shete Arts, Comm. & Sci.Senior College Deolali Camp, Nashik

F.Y.B.S	II Sc.	Inorganic Chemistry CH-201	 various theories and principles applied to revel atomic structure Origin of quantum mechanics and its need to understand structure of hydrogen atom Schrodinger equation for hydrogen atom Explain rules for filling electrons in various orbitals- Aufbau's principle, Pauli exclusion principle, Hund's rule of maximum multiplicity Discuss electronic configuration of principles.
F.Y.B.Sc.	ıı	Analytical Chemistry CH-202	 and anomalous electronic configurations Calculations of mole, molar concentrations and various units of concentrations which will be helpful for preparation of solution. Relation between molecular formula and empirical formula. Basics of type determination, characteristic tests and classifications, reactions of different functional groups. Basics of chromatography and types of chromatography Theoretical background for Paper and Thin Layer Chromatography
S.Y.B.Sc	ш	CH-301 Physical and Analytical Chemistry	 Define / Explain concept of kinetics, terms used, rate laws, molecularity, order, factors affecting rate of reaction. Classification of Adsorption Isotherms, to derive isotherms Solve / discuss problems using theory. Define, explain and compare meaning of accuracy and precision. Apply the methods of expressing the errors in analysis from results Perform calculations involved in volumetric analysis. Explain why indicator show colour change and
Y.B.Sc	Ш	CH-302: Inorganic and Organic Chemistry	 Define terms related to molecular orbital theory Explain and apply LCAO principle for the formation of MO's from AO's. Apply MOT to explain bonding in diatomic molecules other than explained in syllabus.
Co-Ordi IQA (nathrao S	nator C ahadu She Senior Col	te con Deolali	Explain Werner's theory of coordination compounds Give the mechanism of reactions involved. To



S.Y.B.	III	CH-303: Practical Chemistry-III	correlate reagent and reactions Explain / discuss synthesis of alkyl / aryl halides. To correlate reagent and reactions Able to differentiate between alcohols and phenols Verify theoretical principles experimentally. Understand systematic methods of identification of substance by chemical methods Perform organic and inorganic synthesis Set up the apparatus / prepare the solutions - properly for the designed experiments. Perform the quantitative chemical analysis of substances explain principles behind it. Systematic working skill in laboratory will be imparted in student.
S.Y.B.Sc	IV	Physical and Analytical Chemistry CH-402:	 Discuss meaning of phase, component and degree of freedom. Derive of phase rule. Define various terms, laws, differentiate ideal and no-ideal solutions. Explain distillation of liquid solutions from temperature – composition diagram. Solve problem by applying theory Explain / define different terms in conductometry. Explain / discuss conductometric titrations. Explain / define different terms in Colorimetry Apply colorimetric methods of analysis to real problem in analytical laboratory. Solve problems based on theory / equations. Explain properties of adsorbents, ion exchange resins, etc. Isomerism in coordination complexes
S.Y.B.Sc	IV	Inorganic and Organic Chemistry	 Apply principles of VBT to explain bonding in coordination compound of different geometries. Explain principle of CFT. Explain spectrochemical series, tetragonal distortion / Jahn- Teller effect in Cu (II) Oh complexes only. Identify and draw the structures aldehydes, ketones amines and carboxylic acids. Explain / discuss synthesis of aldehydes, ketones, amines and carboxylic acids. Perform inter conversion of functional groups.
Co-O Shri Eknathri Arts, Comm. & Deolali Ci	OCI. Senia	CH-403: Practical Chemistry- IV Shete College hik	Verify theoretical principles experimentally Interpret the experimental data on the basis of theoretical principles. Understand systematic methods of identification Principal Shri Eknathrao Sahadu Shete Art's Comm. & Sci. Senior College, Deolali Camp, Nashik

	IV		substance by chemical methods.
W		_	Write balanced a writer that we will be writer to be with the work of the writer that we will be writer to be
S.Y.B.Sc	:	-	Write dataficed edulation for all the aleres
			reactions performed in the laborators
			Set up the apparatus properly for the designed
			experiments.
		1	• Perform the quantitation 1
1 1		1	Perform the quantitative chemical analysis of substances and oblate.
			substances and able to explain principles behind
TVDC	V	DSEC-I: CH-501:	10.
T.Y.B.Sc		Physical Chamita	Know historical of development of quantum mechanics in above
1 1		Physical Chemistry- I	monantes in chemistry
			Understand and explain the differences
1 1			between classical and quantum mechanics.
			Understand the idea of
1 1			• Understand the idea of wave function
E I			Understanding of De Broglie
1			hypothesis
1			the uncertainty principle
			orderstanding the operators: Position
			momentum and energy
			Solving Schrodinger agust:
			 Solving Schrodinger equation for 1D, 2D and 3D model
	1		
			• Physical interpretation of the ψ and ψ2 and
			sketching the wave function
1	1		Applications to conjugated systems
			and qualitum tunnelling Numerical
275	17	DSEC-I: CH-502:	Troblems
Y.B.Sc	V		 Define basic terms in gravimetry,
	-	Analytical Chemistry-	spectrophotometry qualitative analysis
1		I	parameters in instrumental analysis. Such as:
1			Gravimetry precipitation analysis. Such as:
1			Gravimetry, precipitation, solubility product,
			ionic product, common ion effect, precipitating
1	1		agont, washing of ppl., drying and ignition of
1		_	ppt., initiality range, detection limit procisi-
1			decuracy, Sensitivity Selectivity Dobust
			and Ruggedness, electromagnetic vadication
1			spectrophotometry, Reers law absorbance
			uansimuance, molar absorptivity
			monochromator, wavelength of marine
N.			absorbance, metal ligand ration, qualitative
		1	analysis, group reagent, dry tests, wet test,
		1	confirmatory test, precipitation,
		T	thermogravimeter, the
	1		thermogravimetry, thermogram, percent wt.
	1		loss, differential thermal analysis.
			Identify important parameters in analytical
			processes or estimations Example: minimum
		- 1	analyte concentration in particular mothed
			reagent concentration in particular analysis
		1	(gravimetry,
			Spectrophotomoty
			inermogravimetry), reagent for particular analysis
	1		reaction condition to convert analyte into
		1	measurable form, drying and ignition
_ 1	. /	,	temperature for not in and ignition
BH		AL IVE	temperature for ppt in gravimetry, heating rate
			uiciiiiiyiavimetro waxalaLalaka
Co-Ordi		hete college	pectary, group reagent, removal Principal Shri Eknathrao Sahadu Shate
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SI Arts Deolali Camp, Nashik

T.Y.B.Sc V DSEC-I: CH-503: Physical Chemistry Practical - I	borate and phosphate in qualitative analysis, etc. Explain different principles involved in the gravimetry, spectrophotometry, parameters in instrumental analysis, qualitative analysis. Perform quantitative calculations depending uponequations student has studied in the theory. Furthermore, student should able to solve problems on the basis of theory. Discuss / Describe procedure for different types analyses included in the syllabus. Select particular method of analysis if analyte sample is given to him. Differentiate / distinguish / Compare among the different analytical terms, process and analytical methods. Demonstrate theoretical principles with help of practical. Design analytical procedure for given sample. Apply whatever theoretical principles he has studied in theory during practical session in laboratory. To determine the specific refractivity's of the given liquids. To determine the molecular refractivity of the given liquids. To determine the molecular refractivity of the given liquids. To determine the molar refraction of homologues methyl, ethyl and propyl alcohol and show the constancy contribution to the molar refraction by CH2 group. Determine the refractive index of a series of salt solutions and determine the concentration of a salt of unknown solution. Spectrophotometry and colorimetry. To titrate Cu2+ ions with EDTA photometrically. To determine the indicator constant of methyl red indicator. To estimate of Fe3+ ions by thiocyanate method. Cobalt by using R-nitroso salt method. To determine the order of reaction for the oxidation of alcohol by potassium dichromate and potassium permanganate in acidic medium calorimetrically. Simultaneous determination of Cu2+ and Ni2+ ions by colorimetry/spectrophotometry method Conductometry: Titration of a mixture of weak acid and strong acid with strong alkali. To determine the normality of citric acid in given fruit by titrating it against standard NaOt solution by conductometric method. Principal Shrie Examples in Apshik
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Shri Eknathrao Sahadu Shete s, Comm. & Sci.Senior College	Shri Eknathrao Sahadu Shete
s, Comm. & Sci.Senior College	Nashii Art's Comm. & Sci. Senior College,
Deolali Camp, Nashik	Deolali Camp, Nashik

T.Y.B.Sc	V	DSEC-II: CH-504:	 To determine λ∞ of strong electrolyte (NaCl or KCl) and to verify Onsager equation. To estimate the amount of lead present in given solution of lead nitrate by conductometric titration with sodium sulphate. To determine the relative strength of monochloro acetic acid and acetic acid conductometrically. Viscosity: To determine the molecular weight of a high polymer by using solutions of different concentrations.
		Inorganic Chemistry I	 Explain electroneutrality principle and different types of pi bonding. Able to explain Nephelauxetic effect towards covalent bonding. Explain MOT of Octahedral complexes with sigma bonding. Able to explain Charge Transfer Spectra.
			 Able to compare the different approaches to bonding in Coordination compounds. To understand about inert and labile complexes and stability of complexes in aqueous solutions Classification of reactions of coordination compounds The basic mechanisms of ligand substitution reactions. Substitution reactions of square planer complexes.
			 Tran's effect and applications of Trans effect Stereochemistry of mechanism Gain the knowledge of inorganic reaction mechanisms available in the literature to solve chemical problems.
			 To know position of -block elements in periodic table The meaning of term f-block elements, Inner transition elements, lanthanides, actinides. Electronic configuration of lanthanides and actinides. Oxidation states of lanthanides and actinides
			 4. Separation lanthanides by modern methods. To know the general electronic configuration & electronic configuration of elements. To know trends in periodic properties of these elements w.r.t. size of atom and ions, reactivity, catalytic activity, oxidation state, complex formation obility.
BE	- Ju	9	magnetic properties mon-dtoichiom et
Co-Ordi IQA Shri Eknathrao S Arts, Comm. & Sci. Deolali Camp	C ahadu She Senior Col	ite Nathran 142	melting point, boiling point Principal Shri Eknathrao Sahadu Shete Art's Comm. & Sci. Senior College, Deolali Camp, Nashik

	T.Y	.B.Sc	\mathbf{V}	DSEC-II: CH-505:		Importance of chemical industry,
		4000		Industrial Chemistry	7	• Meaning of the terms involved,
						• Comparison between beta
		1				 Comparison between batch and continuous Concept of basic chemicals,
						Their uses and man C
						Their uses and manufacturing process
				_		Importance of sugar industry,
						Manufacture of direct
					1	 Consumption (plantation white) sugar with flow diagram
	1	1		-		diagram.
						• Cane juice extraction by various methods
		1		*		Different types of soap products
				1	J.	• Chemistry of soap.
	1				- 1	Raw materials required for soap manufacture Dyes: introduction
						Dyes. Introduction,
						 Dye intermediates,
				-		Structural features of a dye;
		1				 Classification of dves
\sim				P-		Synthesis, Structures, properties and applications of the synthesis o
	m * * -		V	DSEC-II: CH-506:	_	applications of dves
	T.Y.B	3.Sc		Inorganic Chemistry	•	Gravimetric estimations: Gravim othic
		- 1	1			of reas re203. Gravimetric estimation and
		1		Practical - I		busing nomogeneous precipitation and
			1		•	Gravinicule estimation of Nickel as N: DMG
			1		•	Allalysis of sodium bicarbonate from mixture I
						dietiliai decomposition method
			1		0	Determination of water of crystallization by
		1			J.	thermal decomposition
					•	Analysis of Food/Pharmaceutical sample for ash
						and surpliated ash example-Ashirin
					•	inorganic preparation: Preparation of increase
		1				complexes and spot tests for metal ions and
		1	-			ingalius. Preparation of hexamminenickol(II)
					1	chioride. Preparation of Potassium
			1			trioxalatoferrate(III). Preparation of Management
						(III) acceptacetonate. Preparation of
						tris(glycinato)nickelate(II), Preparation of
						1 otassium dioxalatocuprate(II)
		19			•	Inorganic qualitative Analysis: Inorganic
			1			qualitative analysis: simple water soluble mixture,
		1	ľ			matures collaining borates and mixtures
						containing phosphates.
					1.7	Limit test for iron, chloride and sulphate from
						pharmaceutical raw materials.
			()		1	Qualitative and confirmatory tests of inorganic
			1		1	toxicants of any four ions (Borate, copper,
		-			9	hypochlorite or nitrate or nitrite, Sb or Bi, Iodate, H2O2).
	T.Y.B.Sc	\mathbf{v}		DSEC-III: CH-507:		Dof. 1 1
	1.1.0.00	1		Organic Chemistry - I		orassity polynuclear and
			1	1		hetreonuclear aromatic hydrocarbons. Write the structure synthesis of
			1		-	structure, synthesis of
	B	1 -		6		aromatic hydrocarbons.
L				0;		Meaning of active methylene group
	Co-	Ordi	nator	//.	ushe	"6 -11
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T.Y.B.Sc V	V DSEC-III: CH-508: Chemistry of Biomolecules DSEC-III: CH-509: Organic Chemistry Practical-I	 Reactivity of methylene group Synthetic applications ethyl acetoacetate and malonic ester. What is rearrangement reaction? Different types of intermediate in rearrangement reactions 1,1 and 1,2 elimination E1, E2 and E1cB mechanism with evidences of these reactions 4 Understand stereochemistry by using models and learn reactivity of geometrical isomers The student will understanding of Cell types, Difference between a bacterial cell, Plant cell and animal cell. Biological composition and Organization of cell membrane, structure and function of various cell organelles of plant and animal cell. Concepts of biomolecules, Bonds that link monomeric units to form. The student will understand the types of carbohydrates and their biochemical significance in living organisms, structure of carbohydrates and reactions of carbohydrates with Glucose as example. Properties of carbohydrates The student needs to know the types of lipids with examples, structure of lipids,properties of lipids Basic concepts of Endocrinology. Types of Endocrine glands and their hormones. Biochemical nature of hormones. Mechanism of action of lipophilic and hydrophilic hormones. To develop skills required in chemistry such as the appropriate handling of apparatus and chemicals. The student will learn the laboratory skills needed to design, safely conduct and interpret chemical research. To expose the students to an extent of experimental techniques using modern instrumentation. The student will develop the ability to effectively communicate scientific information and research results in written and oral formats. Perform the quantitative chemical analysis of binary mixture, explain principles behind it. Separate, purify and analyse binary water insoluble mixture.
*		Separate, purify and analyse hipary water
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Shri Eknathrao Sah Arts, Comm. & Sci Sa	nior College	Principal Shri Eknathrao Sahadu Shete
Deolali Camp, I	nior College Nashik	Art's Comm. & Sci. Senior College, Deolali Camp, Nashik

T.Y.B.Sc T. Y. B.Sc	V CH-510 (B): Polym Chemistry CH-511 (A): Environmental Chemistry DSEC-IV: CH-601: Physical Chemistry-II	 Difference between simple compounds and polymer. Names of polymers. Various ways of nomenclature. Difference between natural, synthetic, organic and inorganic polymers. Terms-Monomer, Polymer, Polymerization, Degree of polymerization, Functionality, Number average, Weight average molecular weight. Mechanisms of polymerization. Polymerization techniques. Uses & properties of polymers. Role of polymer industry in the economy. Advantages of polymers Importance and conservation of environment Importance of biogeochemical cycles Water resources Hydrological Cycle Organic and inorganic pollutants Water quality parameters Electrochemical cells: Explanation of Daniell cell, Conventions to represent electrochemical cells Thermodynamic conditions of reversible cell, Explanations of reversible and irreversible electrochemical cell with suitable example, EMF of electrochemical cell and its measurement. Distinguish between crystalline and amorphous solids / anisotropic and isotropic solids. Explain the term crystallography and
		Solids.
Co-Ord IQA Iri Eknathrao S	inator	Types and properties of radiations: alpha, beta and gamma Detection and Measurement of Radioactivity: Cloud chamber, Ionization Chamber, Geiger-Muller Counter, Scintillation Chunter, Film Sheados Principal Shri Eknathrao Sabadu Shada

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		X7T	DSEC-IV: CH-602:	
-	T.Y.B.Sc	VI	Physical Chemistry-	the terms-Solution
			III	electrolytes nonelectrolytes and
J.			111	congative properties.
		1		 Lowering of vapour pressure of solvent in solution.
				• Factors affecting on solid state reactions,
				• Rate laws for reactions in solid state
				Applying rate laws for solid state reactions Cohesing F.
				Collesive Energy of ionic crystals bear 1
				Coulomb's law and Born Haber Cycle
				Correspondence between energy levels in the
				atom and energy bands in solid
				 Band structure in solids – Na, Ca and diamond History of polymers.
1		1		Classification of polymers
				Chemical bonding & Molecular forces in
				Polymer Polymer
				Molecular weight of polymers
				Fractical significance of polymer molecular
т	Y.B.Sc	VI	DSEC-IV: CH-603:	weights
1.	1.D.SC	10.000	Physical Chemistry	To determine the PKa value of given
			Practical-II	monobasic weak acid by potentiometric titration.
				• To determine the formal redox potential of
				rez+/ res+ system potentiometrically
				To determine the amount of NaCl in the circum
	1			solution by potentiometric titration against
A				silver intrate.
1				To determine the solubility product and solubility of AgCl potentiometrically using chemical call.
				chemical cell.
				• Estimate the amount of Cl-, Br- and I- in
				given unknown halide mixture by titration it
				against standard AgNO3 solution (mixture of any two ions).
				To prepare standard 0.2 M Na2HPO4 and 0.1 M Citrig poid and the standard of the standard
				The Citile acid Solution, hence prepare four
				different buffer solutions using them
				Determine the pH value of these and unknown
				Solution.
				To determine the composition of Zinc ferrocyanide complex potentiometrically
				10 determine the standard electrode notantial
	1			of Cu and Ag electrodes and to determine the
1				Livir of a concentration cell.
				To determine the degree of hydrolysis of
				aniline hydrochloride. To determine the dissociation
	-			To determine the dissociation constant of oxalic acid by
				pH-metric titration with strong base
	10		_	Determination of Pka of given weak acid by
- 2	B	1	-0-	pri metry illuation with strong base
	Co-Ordi	nator	Shete	To determine the acid and base dissociation constant of an aminor and
Shri E	IQA	C	Shere Deola	constant of an amino acid and hence the
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		,	程 42240	Deolali Camp, Nashik

-		isoelectric point of an acid.
		pH metric titration of attack.
		pH metric titration of strong acid against strong base by pH masses.
		strong base by pH measurement and hence determine the concentration and strength of
1 1 1		strong acid.
		To determine plateau voltage of the given G M
		counter.
		• To determine the resolving time of GM counter.
	OPG VI	To determine Emax of beta particle.
T.Y.B.Sc VI	SEC-V: CH-604:	To understand M-C bond and to define
Ino	rganic Chemistry -	organometallic compounds
	II	To define organometallic chemistry
		To understand the multiple bonding due to CO ligand
		ligand.
		To know methods of synthesis of binary metal carbonyle
		carbonyls of synthesis of binary metal
		 Understand the phenomenon of
		catalysis its basis
		principles and terminologies
		Define and differentiate homogeneous and
		neterogeneous catalysis.
		• Give examples and brief account of
1 1 1		nomogeneous catalysts
		Understand the essential properties of
		homogeneous catalysts-Give the catalytic reactions
		reactions
		i i i i i i i i i i i i i i i i i i i
		inorganic ions & compounds.
		Know the abundance of elements in living System and and The state of the sta
		system and earth crust.
		Give the classification of metals as enzymatic
		and non-enzymatic
		• Understand the role of metals in non-enzymatic
TVPS: VI DSEC	C-V: CH-605:	processes.
	nic Chemistry -	Student will learn the concept of acid base and their theories.
	III	then theories.
		 They will also come to know different properties of acids and bases.
		 Strength of various types acids.
*		How acid and base strengths get affected in
		non-aqueous solvents.
		Draw the simple cubic, BCC and FCC
		structures.
2		• Identify the C.N. of an ion in ionic
		solia.
	(a)	dentify the type of void.
		Know the effect of radius ratio in determining the crystal structure.
		Be able to define Pauling's junivalent radius
		and crystal radius
81		Different Zeolite Framework Types and their
Co-Ordinator		an some striction
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1		
		Zeolite synthesis and their structure
		Application of zeolites
		• Various methods of nanoparticle synthesis
		• Stabilization of Nanoparticles in solution
		Properties and Application of Nanoparticles Know about early
	Dereti	Know about carbon nanotube and its application Analysis of Planta and its application
T.Y.B.Sc VI	DSEC-V: CH-606:	• Analysis of Phosphate (PO43-) from Fertilizer.
	Inorganic Chemistry	• Analysis of Iodina from I i i i i i m Fertilizer.
	Practical-II	Analysis of Iodine from Iodized salt. Strength of medicinal Hoose.
		Strength of medicinal H2O2. Analysis of Colsing for the second sec
		ritarysis of Calcium from milk nowder
8		• Analysis of Cu from Cu-Fungicide.
	1	• Estimation of Na by flame photometry by
		candiation curve method.
		Estimation of Na by flame photometry by regression model.
		regression method.
		• Estimation of K by flame photometry by
		calibration curve method.
1		• Estimation of K by flame photometry by
		regression method.
		Purification of water using cation/anion exchange and in the second se
		Cachange resin and analysis by qualitative
		analysis /conductometry.
		 Synthesis of Silver nanoparticles
		 Synthesis of ZnO nanoparticles
1 1		• Verification of periodic trends using solubility
		of alkaline earth metal hydroxides Ca(OLI)2
		$^{\text{IVIg}}(\text{OH})2$, $\text{Cr}(\text{OH})2$. $\text{Ba}(\text{OH})2$
		Synthesis of amine complexes of Ni(II) and its
1		ingalid exchange reaction (hidentate liganda
		inke acac, DMG, Glycine) by substitution
		method. OR Determination of the Metal to
		ligand ratio (M : L) in complexes
	*	Solvent free microwave assisted one not
		synthesis of pthalocynin copper (II) complex
		OR renion reaction:
777	DSEC-VI: CH-607:	Degradation of H2O2 using Fe catalyst.
V.B.Sc VI		• Students will learn the interaction of radiations
	Organic Chemistry-II	with matter. They will understand different
		regions of electromagnetic radiations. They
		will know different wave parameters
		• Students will learn the principle of mass
		spectroscopy, its instrumentation and nature of
		mass spectrum.
	200	Students will understand the principle of UV
		spectroscopy and the nature of ITV spectrum
		They will learn types of electronic excitations
	- 1	Students will understand the principle of NIMD
		spectroscopy and will understand various
		terms used in NMR spectroscopy. They will
T I		
		measurement of chemical shift and
		Counting
21 _ 0		coupling constants.
3	190	St. St.
Co-Ordinar	or //	Shoteldents will be able to determine the
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-			structure of simple organic compounds on the basis of • Spectral data such as λ max values, IR
	Yar	DCEC VII. CIT COO	frequencies, chemical shift (δ values
T.Y.B.	.Sc VI	DSEC-VI: CH-608: Organic Chemistry-III	• Study the Discount is a
	XXX	DSEC VI. CII (00	oxidizing, reducing agents
T. Y. B.Sc	VI	DSEC-VI: CH-609: Organic Chemistry Practical-II	 Explain "fingerprint region" of an infrared spectrum can used in the identification of an unknown compound. Identify the functional group or groups present
			Identify the broad regions of the infrared
			N-H, C-H, and O-H. C=C and C=N. C-O
			C=N, and C=C. Understand use NMR spectra to determine the
			structures of compounds. Interpret integration of NMR spectra
			• Calculate coupling constants from 1 H NMR
			Interpret elemental analysis technique
			 Practical knowledge of handling chemicals. Achieve the practical skills required to estimations of glucose and glycine.
			Achieve the practical skills required to Saponification value of oil.
		2-	Determine the molecular weight of given
			tribasic acids • Apply the principles of extraction
			• Understand the equipment for extraction
			• Defines the basic parameter of
			chromatography Explain the processes of a chromatography analysis
			Describes the types and materials of column
T. Y.	VI	DSEC-VI: CH-610	To understand wariants
B.Sc		(A):	SUII DIODEITIES and their impact and 1
3	10	Chemistry of Soil and	The state of the soll
Co-O	rdinato	Agrochemicals	Explores the problems and potentials of soil
Shri Eknathe	QAC	Shate	Explores the problems and potentials of soil Principal Shri Eknathrao Sahadu Shete
,	O A A MILE	College	Shri Eknathrao Sahadu Shete Art's Comm. & Sci. Senior College,
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	T. Y.	VI	DSEC-VI: CH-	and decide the most appropriate treatment for land use. The Reclamation and management of soil physical and chemical constraints. Useful in making decisions on nutrient dose, choice of fertilizers and method of application etc. practiced in crop production. Advanced analytical and instrumentation methods in the estimation of soil. Various Nutrient management concepts and nutrient use efficiencies of major and micronutrients and enhancement techniques. Proper understanding of chemistry of pesticides will be inculcated among the students, different pesticides, their nature and, mode of action and their fate in soil so as to monitor their effect on the environment. Define basic terms in solvent extraction,
7	B.Sc		611(A): Analytical Chemistry-	basics of chromatography HPI C GC and
			II	THIS and AES.
			,	The solvent extraction, aqueous and organic phase, distribution ratio and coefficient, percent extraction.
				percent extraction, ion association complex, theoretical plate, HETP, retention time,
				sciectivity, resolution stationary phase
				normal and reverse phase, ion exchange, column efficiency, carrier gas, split and
		1		spiciess injection, packed column tubular
				Column.
				Atomic absorption and emission spectroscopy, electronic excitation in atoms, nebulization
		1		incomization, atomization reduction of the state of the s
		1		flame atomizers, furnace atomizers
				interference in AES and FES. HCL hydride
			-	generator, etc. Identify important parameters in analytical
				processes or
				estimations. • The reagent concentration S
				The reagent concentration for particular analysis, reagent for particular analysis,
				reaction condition to convert analyte into
				measurable form, wavelength selection in HPLC with spectrophotometric and
				nuorometric detector, solvent or carrier and
			-	in HPLC and GC, choice method for the sample preparation in atomic spectroscopic
1		1	7.	methods, choice of filter and HCL in atomic
				spectroscopic methods, etc.
				Explain different principles involved in the analyses using solvent extraction, basics of instrumental at
	*1		As	and starring chromatography, HPAC, GC,
) well:	#13;	and atomic spectroscopic techniques. Perform quantitative calculations depending
6		ordinat QAC		Principal Shri Franch
Arts	hri Eknathr 6, Comm. &	an Cahad	u Shete	Camp Shri Eknathrao Sahadu Shete
	Deolali C	amp, Na	or College shik	Nashik Art's Comm. & Sci. Senior College, Deolali Camp, Nashik
			- Cly	Nasnik Nasnik

Т. Ү.	VI	DSEC-VI: CH-	upon equations students has studied in the theory. Furthermore, student should able to solve problems on the basis of theory. Differentiate / distinguish / compare among the different analytical terms, process and analytical methods. Demonstrate / explain theoretical principles with help of practical and design analytical procedure for given sample.
B.Sc		611(B): CHEMISTRY OF COSMETICS &	 Prepare hair dyes, hair spray and shampoos. Prepare lotions, lipsticks and talcum powder Prepare creams antiperspirants and artificial flavours.
<u>⊸</u>	o-Ordin	PERFUMES	• Understand the chemistry of essential oils.
Shri Ek Arts, Com	IQAC nathrao Sa	hadu Shete	Shri Eknathrao Sahadu Shete Art's Comm. & Sci. Senior College, Deolali Camp, Nashik



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According to Savitribai Phule Pune University, Pune

- Program Outcomes
- Program Specific Outcomes
- Course Outcomes

Co-Ordinator IQAC

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Principal

Shri Eknathrao Sahadu Shete Art's Comm. & Sci. Senior College,

DEPARTMENT OF BOTANY

Programme Outcomes: B. Sc. Botany

B.Sc. Baotany	After successful completion of three year degree program in Botany a student is able to:
	student is able to;
Programme	PO-1. Students know about different types of lower & higher plants the
Outcomes	avalution is about different types of lower & higher plants the
(
	ecological importance.
	PO-2. Cell biology gives knowledge about 11
	PO-2. Cell biology gives knowledge about cell organelles & their
	PO-3. Molecular highers at
	PO-3. Molecular biology gives knowledge about chemical properties of nucleic acid and their role in living contains
	nucleic acid and their role in living systems.
	10-4. Genetics provides knowledge about laws C: 1
	genetic interactions, chromosomal abrasions & multiple alleles.
	PO-6. Student can describe morphological & reproductive characters of plant and also identified different plant for its
	plant and also identified ties
	plant and also identified different plant families and classification.
	the collottic importance of various 1
	artificial methods of plant propagation
	10-6. Use modern Botanical techniques and 1
	PO-9. To inculcates the scientific temperament in the
	PO-9. To inculcates the scientific temperament in the students and outside the scientific community.
rogramme	PSO-1. Students appring S.
pecific Outcomes	theory and practicals.
	PSO-2. To explain basis plant of the
	PSO-2. To explain basis plant of life, reproduction and their survival in nature.
	PSO-3. Helped to understand role of the
	PSO-3. Helped to understand role of living and fossil plants in our life.
	PSO-4. Understand good laboratory practices and safety. PSO-5. To create awareness of the safety.
	PSO-5. To create awareness about cultivation, conservation and sustainable utilization of biodiversity.
	sustainable utilization of biodiversity PSO-6. To know advance tealwise
	PSO-6. To know advance techniques in plant sciences like tissue culture, Phytoremediation, plant disease management of
	Phytoremediation, plant disease management, formulation of new herbal drugs etc.
	PSO-7. Students able to start
	PSO-7. Students able to start nursery, mushroom cultivation, biofertilizer production, fruit preservation and horticultural practices.
	production, fruit preservation and horticultural practices

Shri Ekrathrao Sahadu Shete Shri Eknathrao Sahadu Shete Arts, Comm. & Sci.Senior College Deolali Camp, Nashik

Deolali Camp Nashik 422401

After completion of these courses students should be able to: Paper-I. SemI: Plant Life and Utilization -I Paper-II, Sem-I: Practical Course based on Paper I & Paper II Paper-I, Sem-II: Plant Morphology and Anatomy Students will learn about Life Cycle of Spirogyra, Agaricus. Riccia Lichens, Mushroom Cultivation, Inflorescence, Flowers and Fruits Students will understand about the habit of the angiosperms body. They will know the vegetative characteristics of the plant as they understand the plant morphology. Understand the scope & importance of Anatomy. They get knowledge about various tissue systems. Paper-II, Sem-II: Principles of ant Science Paper-II, Sem-II: Practical Course based on Paper I & Paper II Paper-II, Sem-II: Practical Course based on Paper I & Paper II Paper-II, Sem-II: Practical Course based on Paper I & Paper II Paper-II, Sem-II: Practical Course based on Paper I & Paper II Paper-II, Sem-II: Practical Course based on Paper I & Paper II Paper-II, Sem-II: Practical Course based on Paper I & Paper II Paper-II, Sem-II: Practical Course based on Paper I & Paper II Paper-II, Sem-II: Practical Course based on Paper I & Paper II Paper-II, Sem-II: Practical Course based on Paper I & Paper II Paper-II, Sem-II: Practical Course based on Paper I & Paper II Paper-II, Sem-II: Practical Course based on Paper I & Paper II Paper-II, Sem-II: Practical Course based on Paper I & Paper II Paper-II, Sem-II: Practical Course based on Paper I & Paper II Paper-II, Sem-II: Practical Course based on Paper I & Paper II Paper-II, Sem-II: Practical Course based on Paper I & Paper II Paper-II, Sem-II: Practical Course based on Paper II Paper-II, Sem-II: Practical Course based on Paper II Paper-II, Sem-II: Practical Course based on Paper II Paper-II, Sem-II: Prac	Course	Outcomes
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Deolali Camp Nashik 422401

Sem-I BO 232: Paper II- Plant Physiology	Understand scope and application of plant physiology. Students will able to know the movement of sap and absorption of water. Understand the plant cell in relation to water Understand the process of transpiration. Students will learn about the nitrogen metabolism and its Importance. Learn about the seed dormancy and germination. Students know about the physiology of flowering and different
Sem-II BO 241: Paper I- Plant Anatomy and Embryology	Student will able to know about scope of plant anatomy and types of tissue. Student will learn Epidermal, Machanial and Vascular tissue. System. Learn about Normal and Anamolous secondary.
	Learn about scope of Plant Embryology. Understand the Microsprangium, Megasprangium, Male and Female gametophyte. Understand the fertilization process in plants as well as about endosperm and embryo.
BO 242: Paper II- Plant Biotechnology	Understand scope and importance of plant biotechnology Understand the principle, basic technique, types and application of pant tissue culture. Students will learn about concept, production and importance of single cell protein. Learn about the Genetic engineering Understand the genes, genome as well as recombinant D.N.A.technology
Practical course	Student will able to demonstrate proficiency in experimental techniques and methods of analysis. Students learn to carry out practical work in the field and in the
Co-Ordinator IQAC Shri Eknathrao Sahadu rts, Comm. & Sci.Senior Deolali Camp. Noch	Shete College Camp Nashik Art's Comm. & Sci. Senior College, Deolali Camp, Nashik

DEPARTMENT OF ZOOLOGY

Zoology	F.V.B.Sc and S.V. D.S.
Program specific outcomes	PSO-1. Understand the nature and basic concepts of cell biology, genetics, taxonomy, physiology, ecology and applied Zoology PSO-2. Analyze the relationships among animals with their ecosystems PSO-3. Perform procedures as per laboratory standards in the areas of Taxonomy, Physiology, Ecology, Cell biology, Genetics, Applied Zoology, Sericulture. PSO-4. Understand the applications of Zoology in Agriculture, Medicine and daily life PSO-5. Gains knowledge about research methodologies, effective communication and skills of problem solving methods PSO-6 - Contributes the knowledge for Nation building.

F. Y. B.Sc. Course	Outcomes
ZO-111,121: Animal diversity I and II ZO- 112: Animal Ecology:	CO1: To understand the Animal diversity around us. CO2: To understand the underlying principles of classification of animals. CO3: To understand the terminology needed in classification. CO4: To understand the differences and similarities in the various aspects of classification. CO5: To classify invertebrates and to be able to understand the possible group of the invertebrate observed in nature. CO1: The learners will be able to identify and critically evaluates in relation to professional and societal standards of ethics are ere due to the dynamics in population. CO2: To understand anticipate, analyze and evaluate natural resource issues and act on a lifestyle that conserves nature. CO3: The Learner understands and appreciates the diversity of ecosystems and applies beyond the syllabi to understand the local lifestyle and problems of the community. CO4: The working in nature to save environment will help development of leadership skills to promote betterment of environment.
ZO – 122: Cell Biology	CO1: Student will come to know the scope of cell biology. CO2: Identifications of the different structures of Prokaryotic, Eukaryotic.
0-Ordinator	CO3: Knowledge of the structure of unit membranes and its different models. CO4: Understanding the different cell organicles. CO5 Comparison between meiosis and mitosis cell division Principal

Co-Ordinator
IQAC
Shri Eknathrao Sahadu Shete
Arts, Comm. & Sci.Senior College
Deolali Camp, Nashik

SHIKSHAN MANDAL BHAGUR'S,

AFFILIATED TO SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE,

Shri Eknathrao Sahadu Shete Arts, Commerce & Science College, Deolali Camp, Nashik Matoshri Yamunabai Karandikar Sankul, Sv.No. 306/1A/4B/2, Barnes School Road, Deolali camp, Tal & Dist.- Nashik-422401

DEPARTMENT OF MATHEMATICS

Program Outcomes	 PO-1: Basic tricks in Mathematics can be helpful to learners in Competitive Examinations. PO-2:Prepare Learners for prominent career in Industry, Banks and for further Academic study. PO-3: Learners can set up mathematical models of real-world problems and obtain solutions for the same. PO-4: Learners have the versatility to work effectively in a broad range of scientific, government, financial, health and other positions. PO-5: Developing the Mathematical Logic which is useful for solving mathematical reasoning problems. PO-6: Ability to calculate and reason to design complex and critical financial models for Bank
Program Specific Outcome	 PSO1: Give the students a sufficient knowledge of fundamental principles, method and a clear perception of in numerous power of mathematical ideas and tools and know how to use them by modelling, solving and interpreting. PSO2: Reflecting the broad nature of the subject and developing mathematical tools for continuing further study in various fields of science. PSO3: Enhancing students' overall development and to equip them with mathematical modeling abilities, problem solving skills, creative talent and power of communication necessary for various kinds of employment. PSO4: Enabling students to develop a positive attitude towards mathematics as an interesting and valuable subject of study.

FIRST YEAR BACHLOR OF MATHEMATICS (CBCS 2019)

Course Outcomes	By the end of this course, student will be able to:
Paper I Course Code: MT 111 Course Name: Algebra Co-Ordinator IQAC Shri Eknathrao Sahadu Shete Arts, Comm. & Sci.Senior College Deolali Camp, Nashik	1.Explain the basic concepts of set theory. 2. examine the properties of fundtions and relations. 2. example the properties of fundtions and relations. 2. example the properties of fundtions and relations. 2. example the properties of fundtions are properties. 2. example the properties of fundtions are properties. 2. example the prop

Paper II Course Code: MT 112 Course Name: Calculus	Binomial theorem. 4. analyse properties of the divisibility 1.define Bounded set, Supremum and Infimum of a set. 2.determine the convergence of sequences of renumbers 3.Examine the properties of sequences of real numbers 4.classify the first order differential equation.
Paper III Course Code: MT113 Course Name: Maths Practical	1.explain the properties of real number. 2.solve the first order first degree differential equation. 3. examine the properties of sets, functions and relations 4. solve the problems by using Induction theorems, well ordering principle, binomial theorems and congruence relation
Paper I Course Code: 121 Course Name: Analytical Geometry	 1.Introduction to analytical geometry of 2 dimensional. 2. Study of lines in 2 and 3 dimensions. 3.Finding equation in various form of line, circle, ellipse, sphere, cones etc. 4.Give the knowledge of geometry using maxima software.
Paper II Course Code:122 Course Name: Calculus II	1.Student will be to understand differentiation and fundamental theorem in differentiation and various rules. 2. Geometrical representation and problem solving on MVT and Rolls theorem. 3.Finding extreme values of function. 4. Introduction to Ordinary Differential Equation
Paper III Course Code:123 Course Name: Maths Practical	Maxima software. 1. Problem solve on analytic geometry and calculus by using maxima software. 2. Problem solving on geometry and calculus

SECOND YEAR BACHLOR OF SCIENCE (CBCS 2019)

Course Outcomes	By the end of this course, student will be able to:
Paper I Course Code: MT231 Course Name: Calculus of Several Variables	1.Gain Knowledge of fundamental concepts of reanumbers in n dimensions. 2.verify the value of the limit of a function at a point using the definition of the limit in R*R 3.Find the extreme value in 2 dimensions. 4.Study multiple integration.
Paper II Course Code:MT232(A) Course Name: Numerical Methods and Its Application	1To apply appropriate numerical methods to solve the problem with most accuracy. 2. Using appropriate numerical methods determine approximate solution of ODE and system of linear
Co-Ordinator IQAC Shri Eknathrao Sahadu Shete Arts, Comm. & Sci.Senior College Deolali Camp, Nashik	Shri Eknathrao Sahadu Shete Art's Comm. & Sci. Senior College, Deolali Camp, Nashik

BACHLOR OF COMMERCE

After successfully Completing B.Com. programme, students will able to

- 1. In depth knowledge, understanding and skills in commerce.
- 2. Build a strong foundation of knowledge in different areas of Commerce.
- 3. Develop the skill of applying concepts and techniques used in Commerce for real life problems.
- 4. Inculcate reading, writing, speaking skills and Business correspondence.
- 5. Creates awareness among society about Law and Legislations related to commerce and business.
- 6. Use effectively recent Trends in Business, Organizations and Industries.
- 7. Communicate effectively about Economic Environment of Country as well as World.
- 8. Use effectively practical skills in real life related to banking and corporate world
- 9. Provides a platform for overall development and develop knowledge level and awareness about Recent Trends of World
- 10. Use new technologies effectively to communicate ideas in the area of commerce.
- 11. Critically evaluate new research findings, ideas, methodologies and theoretical frame work in specialized study.

12. Work collaboratively and productively in groups.

Program Outcomes

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Arts, Comm. & Sci.Senior College

Deolali Camp, Nashik

Shete Aris Composition of Nashik 422401

SHIKSHAN MANDAL BHAGUR'S, AFFILIATED TO SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE,

Shri. Eknathrao sahadu shete Arts, Commerce & Science senior College, Deolali Camp, Nashik

Matoshree Yamunabai Karandikar Shaikshanik Sankul, Sv.No.306/1A/4B/2, Barnes School Road, Deolali Camp, Tal & Dist Nashik-422401.

E-mail: smbcollege2019@gmail.com

COLLEGE ID: PU/AN/ACS/181/2019

Ph.No.0253-4032579

DECLARATION

This is to declare that the information, reports, true copies of the supporting documents, numerical data etc. submitted/presented in the files is verified by Internal Quality Assurance Cell (IQAC) and it is correct as per the record. This declaration is for the purpose of NAAC accreditation of HEI for the 1st cycle period 2019-2020 to 2023-24.

Date: /01/2024

Place: Deolali Camp

IQAC Shri Eknathrao Sahadu Shete Arts, Comm. & Sci.Senior College Deolali Camp, Nashik