

**Dr. Madhukarrao Wasnik PWS Arts & Commerce College**  
**Kamptee Road, Nagpur-26**

**Subject Specific Outcome of Under Graduate Courses**

**BA Compulsory English**

**BA Compulsory English Semester I**

1. The moral imparted in Prose will have a positive impact on the students.
2. The great personalities of real heroes will motivate them to work to be successful.
3. The whole text will contribute in vocabulary enhancement.
4. The learners will get an opportunity to study Indian and English poets and develop a critical outlook through comparison.
5. The drafting skills of the learners will be improved through the prescribed items of grammar.

**BA Compulsory English Semester II**

1. The learners will get an opportunity to study lessons based on themes containing humour, emotional bonding, ethics and values.
2. The life of great personalities will motivate them to excel despite adverse conditions.
3. The poems will encourage the learners to avoid violence and materialism.
4. The learners will gain confidence in Spoken English through Grammar and Composition
5. The learners will explore a variety of reading strategies to foster comprehension and construct relevant and meaningful connections to the text.

**BA Compulsory English Semester III**

1. The learners will learn lessons of morality and humanity.
2. The aim of the text is to make the students realize the importance of having unpolluted water and conserve natural resources.
3. The prescribed life sketches of successful people will act as an inspirational story.
4. Through the poetry section, the learners will learn lessons of humanity and justice.
5. The Grammar and Composition Section will enhance their ability of expression.

**BA Compulsory English Semester IV**

1. The students will learn how immaterial the materialistic world is.
2. The landmark achievements of the revolutionary figures will be a lesson to the learners to emulate.

3. The contents of poetry section will serve as a lesson which will help the learners when they are low in spirit.
4. The learners will gain soft skills which will help them in future.
5. The prescribed text will help students effectively to express and exchange ideas through various modes of Communication.

### **BA Compulsory English Semester V**

1. The learners will learn and implement the principles of simplicity in their daily lives.
2. By reading about the three great personalities the student will feel encouraged towards self-employment.
3. The poetry section will have a positive impact on the minds of the students.
4. The Grammar and Composition section will boost their self-confidence resulting into effective Communication skills.
5. The learners will formulate and defend well-reasoned opinions and arguments.

### **BA Compulsory English Semester VI**

1. The Prose section conveys the message of friendship and relationship that learners will understand.
2. A.P.J. Abdul Kalam's personality and struggle has a great impact on the life of students.
3. The tremendous success achieved by the great personalities will make the learners realize that "If there is a Will, there is a Way".
4. The poetry section spreads message of peace and tranquillity.
5. The learners will develop critical thinking skills to evaluate literary works and understand their cultural and historical contexts.

## **BA English Literature**

### **BA Semester I: English Literature**

Students will

- 1 develop effective poetry reading skills in all its contours
- 2 get awareness about poetry as a part of modern life
- 3 learn and practice critical thinking
- 4 enhance intellectual understanding through the works of contemporary literary stalwarts
- 5 get familiar with Shakespearean drama

## **BA Semester II: English Literature**

Students will

- 1 get educated in originality and efficacy of the English Language
- 2 learn critically analyze poetry
- 3 get familiar with the different genres of novel and travelogue
- 4 learn about forms and terms related to literature
- 5 develop intellectual flexibility

## **BA Semester III: English Literature**

Students will

- 1 get familiar with representative literary text in the historical age of 18<sup>th</sup> and 19<sup>th</sup> century
- 2 learn to identify and analyze critical ideas, values and theme through poetry, essays and novels
- 3 enhance analytical writing skills with language skills
- 4 understand cultural differences
- 5 learn about contemporary socio-economic scenario of the given era

## **BA Semester IV: English Literature**

Students will

- 1 learn to intellectually analyze the differences and the transition from one literary age to another
- 2 understand intellectually and analytically the social-economics problems of the given age
- 3 get familiar with the different trends in literature as realism, romanticism, etc. in the given age
- 4 develop new ideas, values or truths that can impact the culture and society
- 5 imbibe ethical, moral, cultural values

## **BA Semester V: English Literature**

Students will

- 1 get familiar with the modern English literature
- 2 get familiar with representative literary text of the given literary era
- 3 intellectually analyze the culture and the problems of modern age
- 4 develop new perspectives through cultural comparison of the past and the present
- 5 learn and get critical faculties

## **BA Semester VI: English Literature**

Students will

- 1 get exposure to Indian writing in English
- 2 get acquainted representative literary texts of the given era
- 3 learn to do cultural and literary comparative analysis

4 develop poetry reading skills and competency

5 enhance the ability of critical thinking

## **BA Supplementary English Semester**

### **BA Supplementary English Semester I**

1. Learners will develop interest in the English Language through appealing lessons.
2. Learners will enrich their vocabulary through these readings.
3. Learners will be helped to recall basic concepts of the English language.
4. Learners will be suggested ways of improving reading and writing skills.
5. Learners will formulate ideas acquired by learning of language and apply them with different soft skills.

### **BA Supplementary English Semester II**

1. With improved vocabulary the learners will be able to understand the prescribed texts.
2. The students will develop soft skills enabling them to be a better communicator with these language competencies.
3. They would be able to write analytically.
4. Students will develop the taste for reading through material which would acquaint them with a keen and subtle way in which the English language is used.
5. Learners will develop the ability to deal with real life situation.

### **BA Supplementary English Semester III**

1. To develop minds capable of generating ideas, making decisions and reasoning effectively, in order to become improved decision makers, strategists and visionaries.
2. To engage learner in reflective and independent thinking while being an active learner.
3. To formulate ideas acquired by learning of language.
4. To apply ideas with different soft skills, Learners will be helped to enrich their vocabulary to improve communication skills.
5. Learners will relate their learnings to real-life situations.

### **BA Supplementary English Semester IV**

1. Learners will be able to explain ideas and concepts from their learning.
2. Learners will be able to implement strategies in different styles of writing through analytical skills.
3. Learners will organize their ideas into logical reasoning.

4. Students will develop the taste for reading through material which would acquaint them.
5. To assist the learners in independent language comprehension and production.

### **BA Supplementary English Semester V**

1. Learners will be able to value the resources for a sustainable future through critical reading of prescribed.
2. Learners will learn interlinked soft skills through number of activities.
3. Learners will be motivated to develop the imaginative faculty which will sharpen their creativity.
4. The enriched vocabulary of learners will improve their communication skills.
5. To use the basic skills of the English language for applying it in the profession undertaken.

### **BA Supplementary English Semester VI**

1. Learners will develop the taste for reading through material which prescribed them.
2. Learners will develop maturity to understand social issues and respect human values.
3. Learners will be able to put forth ideas, values, and themes which inform and impact culture and society.
4. To understand views of others, mediate contradictory views/disagreements, reaching conclusions in groups.
5. Learners will be able to enter the job market with confidence and the ability to work effectively in the professions of their choice.

## **BA MARATHI**

### **B.A Marathi Semester I**

Name of the Book - साहित्यरंग भाग.१

१०बी ँ सत्र .1 मध्ये विद्यार्थ्यांनी प्राचीन मराठीचे लेखन कसे करावे हे म्हाइंभटाच्या लीळेच्या माध्यमातून जाणून घेतले ँ

२० विद्यार्थ्यांना पाठ्यपुस्तकातील पाठाच्या आधारे ज्योतिराव फुले ँस्वामी विवेकानंद ँ राष्ट्रसंत तुकडोजी महाराज यांच्या सामाजिक ँ शैक्षणिक साहित्यिक विचारांची ओळख करून देण्यात आली व त्यांचे विचार समाजात आजही कितपत उपयोगी ठरतात त्याची जाणीव विद्यार्थ्यांना करून दिली

३० पद्य विभागात मुकुंदराजापासून तर संत ज्ञानेश्वर ँ केशवसुत ँ बाप्सी मर्ढेकर ँ नारायण सुर्वे यांच्या कवितांच्या माध्यमातून विद्यार्थ्यांना प्राचीन काव्यापासून तर आधुनिक काव्यापर्यंतचा प्रवास कसा झाला याचा परिचय झाला ँ

4<sup>०</sup> व्यावहारिक मराठीची आवश्यकता अभ्यासक्रमात का करण्यात आली त्याचे स्वरूप आणि भूमिका विद्यार्थ्यांना समजले ॥

5<sup>०</sup> भाषिक संवाद व्यवहाराची मूलतत्त्वे विद्यार्थ्यांना शिकवून मराठी भाषेतील संवाद कसा प्रभावी ठरेल या संदर्भात माहिती झाली

B.A Marathi Semester II

Name of the Book . साहित्यरंग भाग.१

1<sup>०</sup>बी ॥ सत्र दोनच्या अभ्यासक्रमातून विद्यार्थ्यांना भारतीय लोकशाहीचे भवितव्य व डॉ ॥ बाबासाहेब आंबेडकरांचे विचार आजच्या परिस्थितीत कसे लागू होतात या संदर्भात जाणीव करून देण्यात आली

2<sup>०</sup> ॥ गडागेबाबांनी शाळा दिली ॥ या पाठाच्या आधारे विद्यार्थ्यांना सीमा साखरे यांच्या जीवनात वृत्तांत समजला

3<sup>०</sup> ॥ अजातशत्रू अटलजी ॥ या पाठाच्या आधारे अटल बिहारी वाजपेयी यांच्या व्यक्तिमत्त्वाचा परिचय विद्यार्थ्यांना झाला ॥

4<sup>०</sup> ॥ विवेकवाद ॥ या नरेंद्र दाभोळकरांच्या पाठातून विद्यार्थ्यांमध्ये वैज्ञानिक दृष्टिकोन रुजवून अंधश्रद्धा समाजातून हद्दपार झाली पाहिजे असा संदेश देण्यात आला ॥

5<sup>०</sup> पद्य विभागातून विविध कवी आणि कवितांचा परिचय करून त्यांच्या कवितांच्या आशयसौंदर्य विद्यार्थ्यांनी समजावून घेतले ॥

6<sup>०</sup> व्यावहारिक मराठीतून पत्र लेखन व सारांश लेखन कसे करावे याची माहिती देण्यात आली व प्रत्यक्ष गृहपाठाच्या आधारे त्यांच्याकडून ते करून घेण्यात आले ॥

BA Marathi Semester III

Name of the Book - साहित्यरंग भाग-2

1. संत साहित्याच्या शिकवणीमुळे मानवी मूल्ये रुजवली .

2. अभ्यासक्रमात प्राचीन व मध्ययुगीन तसेच आधुनिक मराठी साहित्याचा समावेश असल्यामुळे त्यातून नैतिक मूल्यांची शिकवण रुजवली .

3. समाज सुधाकर गो . ग . आगरकर यांच्या पाठातून वाचन संस्कृतीचे महत्त्व विद्यार्थ्यांना समजले .

4. समाजसेविका सिंधुताई सपकाळ यांच्या आत्मचरित्रातून कठीण परिस्थिती मनुष्याला कसे पुढे जायचे याची जाणीव विद्यार्थ्यांना करून देण्यात आली .

5. जीवनाकडे आशावादी दृष्टीने कसे पाहावे हे मंगेश पाडगावकर यांच्या कवितेने शिकविले .

B A Marathi Semester IV

Name of the Book - साहित्यरंग भाग-2

- 1.मराठी भाषा किती समृद्ध संपन्न आणि संपूर्ण याची जाणीव निर्माण झाली.
- 2.साने गुरुजी यांची शिकवण आणि कुसुमाग्रज यांच्या देशभक्तीपर कवितेने राष्ट्र प्रेमाने देशभक्ती समाजाविषयी अस्मिता निर्माण झाली
- 3.मराठी भाषेत रोजगाराच्या संधी कोणकोणत्या आहेत याची माहिती उपलब्ध झाली
- 4.मराठी भाषेचा जीवन व्यवहारात योग्य पद्धतीने वापर कसा करायचा हे विद्यार्थी शिकले .
- 5.विद्यार्थी रोजगारभिमुख होण्यास मदत करणारे असे शिक्षण विद्यार्थ्यांना देण्यात आले .

B A Marathi Semester V

Name of the Book - साहित्यरंग भाग-3

- 1.सत्र पाचच्या अभ्यासक्रमात विद्यार्थ्यांना विनोबा भावे व बाबा आमटे यांच्यासह थोर महापुरुषांचा परिचय करून देऊन त्यांच्या कार्यकर्तृत्वाची व विचारांची माहिती विद्यार्थ्यांना झाली .
- 2.करण्यातील आत्मभान यासारख्या पाठातून विद्यार्थ्यांना प्रवास वर्णन या साहित्य प्रकाराचा परिचय झाला .
- 3.वसंत व -हाडपांडे आणि उर्मिला पवार यांच्या कथांच्या आधारे विद्यार्थ्यांना मानवी मूल्यांचा व नैतिक मूल्यांचा परिचय घडवून दिला
4. पद्य विभागात संतांच्या पंडितांच्या आणि शाहिरी कवितेचा परिचय ज्ञानेश्वर ,वामन पंडित , होणाजी बाळा या कवींच्या आधारे विद्यार्थ्यांना झाला
- 5.व्यावहारिक मराठी सारख्या माध्यमातून मुद्रित माध्यमांसाठी व दृकश्राव्य माध्यमासाठी कसे लेखन करावे त्याची लेखन कौशल्य कोणती हे विद्यार्थ्यांना शिकवण्यात आले व रोजगाराच्या संधी कशा उपलब्ध करता येतील याविषयी विद्यार्थ्यांना माहिती झाली .

BA Marathi Semester VI

Name of the Book - साहित्यरंग भाग-3

- 1.सत्र 6 च्या अभ्यासक्रमातून विद्यार्थ्यांना महाराष्ट्रीयन संस्कृतीचा परिचय घडून दिला तसेच भारतीयत्वाची संकल्पना व मराठी वाङ्मय यांचा सहसंबंध विद्यार्थ्यांना समजला.
- 2.प. ल . देशपांडे यांनी हिराबाई बडोदेकर या महान शास्त्रीय गायकेच्या गायनाची व व्यक्तिमत्त्वाची महात्मता व्यक्तिचित्रणातून रेखाटली त्या वास्तवदर्शी व्यक्तीचित्रनाचा परिचय विद्यार्थ्यांना झाला .
- 3.पद्य विभागातून संत एकनाथ , भा. रा तांबे अनिल , ज्योती लांजेवार यासारख्या प्राचीन ,आधुनिक व समकालीन कवींचा परिचय विद्यार्थ्यांना करून देण्यात आला .

4.भाषांतर आणि अनुवादाचे स्वरूप आणि वैशिष्ट्ये विद्यार्थ्यांना शिकवून अनुवाद व भाषांतर कसे करण्यात येते ते समजले

5.मुद्रित शोधन करताना मराठी शुद्धलेखनाची भूमिका किती महत्त्वपूर्ण असते याचे ज्ञान विद्यार्थ्यांना देण्यात आले व रोजगाराच्या दृष्टीने मुद्रित शोधण्याची भूमिका किती महत्त्वपूर्ण आहे हे विद्यार्थ्यांना समजले.

## BA Marathi Literature

### BA Marathi Literature Semester I

1.बी.ए सत्र -1 च्या मराठी साहित्याच्या अभ्यासक्रमात 'माझी जन्मठेप' या आत्मचरित्राच्या माध्यमातून वि.दा. सावरकरांच्या मरणयातना विद्यार्थ्यांसमोर मांडून विद्यार्थ्यांमध्ये कठीण परिस्थितीमध्ये आत्मविश्वास व कुठल्याही प्रसंगाला सामोरे जाण्याच्या प्रेरणा या आत्मचरित्रातून विद्यार्थ्यांपर्यंत पोहोचल्या. तसेच राष्ट्रप्रेम व राष्ट्रभक्ती विद्यार्थ्यांमध्ये निर्माण होण्यास हे आत्मचरित्र फारच उपयुक्त ठरते.

2. आत्मचरित्र या वाङ्मय प्रकारची ओळख करून देऊन त्याची संकल्पना उगम व त्याची ऐतिहासिक वाटचाल विद्यार्थ्यांना समजली.

3. आत्मचरित्र या वाङ्मयप्रकारचा शैली दृष्ट्या अभ्यास कसा करायचा याचे ज्ञान विद्यार्थ्यांना झाले.

4.वि.दा. सावरकरांचे जीवनदर्शन 'माझी जन्मठेप' या आत्मचरित्राच्या आधाराने विद्यार्थ्यांना घडवले.

5.प्रतिभा साधन या पुस्तकाच्या आधारे साहित्य प्रकारांमध्ये असलेल्या प्रतिभा शक्तीचे महत्त्व समजून दिले तसेच साहित्याचे कार्य व ललित साहित्याचे स्वरूप विद्यार्थ्यांना समजले.

### BA Marathi Literature Semester II

1.सत्र दोन च्या अभ्यासक्रमात समाविष्ट असलेल्या 'नटसम्राट' या नाटकाच्या आधारे नाटक या वाङ्मय प्रकारची ओळख विद्यार्थ्यांना झाली.

2.मराठी रंगभूमीची वाटचाल विद्यार्थ्यांना सांगून वि.वा. शिरवाडकर यांच्या नाटकाची पार्श्वभूमी विद्यार्थ्यांना समजावून दिली

3.नाटकाची कथावस्तू व्यक्तिरेखा तसेच नाटकाच्या शैलीच्या दृष्टीने विद्यार्थ्यांना माहिती झाली.

4. शोकात्म या नाट्यप्रकाराची माहिती देऊन 'नटसम्राट' हे नाटक शोकात्म नाटक कसे ठरते याचे ज्ञान विद्यार्थ्यांना झाले.



5.प्रतिभा साधन या पुस्तकाच्या आधारे नाटकातील समर प्रसंग व व्यक्तीदर्शनाचा परिचय विद्यार्थ्यांना झाला .

#### BA Marathi Literature Semester III

1.सत्र तीनच्या अभ्यासक्रमासाठी मराठी कविता या पुस्तकाच्या अंतर्गत 1960 ते 2000 या कालखंडातील प्रातिनिधीक कवितेचा अभ्यास विद्यार्थ्यांनी केला.

2.ना धो महानोर ग्रेस यशवंत मनोहर म.म . देशपांडे सुरेश भट वसंत आबाजी इहाके विठ्ठल वाघ अरुणा ढेरे प्रभा गणोरकर इंद्रजीत भालेराव इत्यादी कवींचा व त्यांच्या कवितेचा परिचय विद्यार्थ्यांना झाला.

3.अभिनव काव्यप्रकाश या पाठ्यपुस्तकाच्या आधारे काव्य लक्षणा व काव्याची प्रयोजने विद्यार्थ्यांनी आत्मसात केली .

4. साठोत्तरी कवितेचा परिचय विद्यार्थ्यांना झाला तसेच ग्रामीण , स्त्रीवादी ,दलित या कवितेच्या प्रकारांविषयी माहिती मिळाली .

#### BA Marathi Literature Semester IV

1.सत्र चारच्या मराठी साहित्य या अभ्यासक्रमामध्ये विद्यार्थ्यांना 1960 ते 2000 या कालखंडातील दहा निवडक कथाकरांच्या प्रातिनिधिक कथासंग्रहाचा अभ्यास करता आला .

2.कथा प्रकाराची संकल्पना व्याख्या व स्वरूप विद्यार्थ्यांना समजले .

3.साठोत्तरी मराठी कथेतील विविध आशयसूत्रे शिकविण्यात आली .

4.साठोत्री मराठी कथेतील व्यक्ती दर्शन व समाज दर्शनाची विद्यार्थ्यांना माहिती झाली.

5.अर्थविचार व शब्दशक्ती इत्यादीचे साहित्यातील महत्त्व विद्यार्थ्यांना .

6.अलंकार विचारांचे साहित्यातील स्थान विद्यार्थ्यांना कळले.

#### BA Marathi Literature Semester V

1.प्रादेशिक कादंबरीचा अभ्यास विद्यार्थ्यांना करता आला

2.कादंबरी या वाङ्मय प्रकाराविषयीची आवड विद्यार्थ्यांमध्ये निर्माण झाली .

3.अभ्यासमात असलेल्या प्रादेशिक कादंबरीमुळे बोली भाषेचे महत्त्वही विद्यार्थ्यांना कळले.

4.ग्रामीण बोली भाषेतील शब्द ग्रामीण संस्कृती यांचा अभ्यास विद्यार्थ्यांना करता आला

5.दलित साहित्य एक आकलन या पुस्तकाच्या आधारे दलित साहित्याविषयी विद्यार्थ्यांना माहिती झाली .

6. दलित साहित्याकडे डोळसपणे विचार करायला या पुस्तकांनी विद्यार्थ्यांना शिकविले .

7.दलित साहित्यातील दलित कथा आणि आत्मकथा यातून वास्तव समाज परिस्थितीचे दर्शन घडले .

#### BA Marathi Literature Semester VI

1.जॉर्ज वॉशिंग्टन कार्द्वर यांच्या एक होता कार्द्वर या आत्मचरित्रातून प्रतिकूल परिस्थितीतही माणसाने कसे जगावे हा आशावाद विद्यार्थ्यांना शिकता आला .

2.आत्मचरित्र वाचनामुळे मोठमोठी ध्येय आत्मसात करण्यासाठी लागणारी सचोटी विद्यार्थ्यांमध्ये निर्माण झाली .

3.प्राचीन मराठी साहित्याचा तार्किकतेच्या आधारावर अभ्यास होण्यास विद्यार्थ्यांना मदत .

4. प्राचीन मराठी साहित्यातील संत साहित्यातील शिकवणीमुळे मानवता आणि मानवी व्यवहाराची सांगड विद्यार्थ्यांना घालता आली

5.भाषा विज्ञान परिचय या पुस्तकामुळे भाषा विज्ञानाच्या अध्ययनात भाषिक कौशल्य आत्मसात झाली .

### BA Compulsory Hindi

#### B.A. Compulsory Hindi Semester I

1 भक्तिकालीन संतो की वाणी में निहित नैतिक तथा सामाजिक मूल्यों को विद्यार्थी आत्मसात कर सकेंगे ।

2 विद्यार्थियों का विभिन्न सामाजिक स्थितियों, दशाओं, मूल्यों से परिचय होगा ।

3 जीवन देखने की तार्किक दृष्टि का विकास होगा ।

4 उनमें माननीय मूल्यों, बुराइयों, कमियों खूबियों के प्रति संतुलित दृष्टि का विकास होगा ।

5 एकांकी के माध्यम से अभिनय कौशल को सीख पाएंगे ।

#### BA Compulsory Hindi Semester II

1 कार्यालयीन पत्रों का प्रारूप तैयार कर सकेंगे ।

2 समाज को देखने का विवेचनात्मक दृष्टिकोण विकसित होगा ।

3 मानवीय मूल्यों तथा भाशा के प्रयोग की समझ बढ़ेगी ।

4 पारिभाषिक शब्दावली की उपयोगिता से अवगत हो सकेंगे ।

5 पत्र लेखन की विशेषता और प्रारूप की जानकारी विद्यार्थियों को प्राप्त होगी।

### **BA Compulsory Hindi Semester III**

- 1 अनिवार्य हिन्दी के प्रति विद्यार्थियों में रुचि निर्माण होगी।
- 2 अनिवार्य हिन्दी की गद्य एवं पद्य विधाओं की जानकारी विद्यार्थियों को प्राप्त होगी।
- 3 भक्तिकालीन संतो की वाणी में उपलब्ध शिक्षा एवं ज्ञान की जानकारी विद्यार्थियों को प्राप्त होगी।
- 4 समाचार लेखन, विज्ञापन लेखन जैसे रोजगारान्मुख क्षेत्र में विद्यार्थी निपुण होंगे।
- 5 विद्यार्थियों को आधुनिक काल की जानकारी प्राप्त होगी।

### **BA Compulsory Hindi Semester IV**

- 1 अनिवार्य हिन्दी के प्रति विद्यार्थियों में रुचि निर्माण होगी।
- 2 अनिवार्य हिन्दी की गद्य एवं पद्य विधाओं की जानकारी विद्यार्थियों को प्राप्त होगी।
- 3 भक्तिकालीन संतो की वाणी में उपलब्ध शिक्षा एवं ज्ञान की जानकारी विद्यार्थियों को प्राप्त होगी।
- 4 संविधान में हिन्दी के महत्व की जानकारी से विद्यार्थी अवगत होंगे।
- 5 मुहावरे एवं लोकोक्तियों के प्रयोग की जानकारी विद्यार्थियों को प्राप्त होगी।
- 6 विद्यार्थियों को आधुनिक काल की जानकारी प्राप्त होगी।

### **BA Compulsory Hindi Semester V**

- हिन्दी विशय के अध्ययन से विद्यार्थियों में भाशा की समझ निर्माण होगी।
- 2 हिन्दी की विविध विधाओं की जानकारी प्राप्त होगी।
  - 3 इंटरनेट और कंप्यूटर के क्षेत्र में हिन्दी के प्रयोग की जानकारी प्राप्त होगी।
  - 4 कार्यालयीन व्यवहार मे हिन्दी के प्रयोग तथा उपयोगिता को समझ सकेंगे।
  - 5 विद्यार्थियों को अनुवाद के सैद्धांतिक और व्यावहारिक जानकारी प्राप्त होगी।
  - 6 हिन्दी की रोजगारपरक क्षमता से विद्यार्थी अवगत होंगे।

### **B.A. Hindi Semester VI**

- 1 हिन्दी विशय के अध्ययन से विद्यार्थियों में भाशा की समझ निर्माण होगी।
- 2 हिन्दी की विविध विधाओं, उपन्यास आदि की जानकारी प्राप्त होगी।
- 3 विद्यार्थी विविध विधाओं की समीक्षा कर सकेंगे।
- 4 विद्यार्थी उपन्यास के कथ्य और षिल्प से अवगत हो सकेंगे।
- 5 विद्यार्थी साहित्यिक लेखन की ओर प्रवृत्त हो सकेंगे।

## **BA Hindi Literature**

### **B.A. Hindi Literature Semester I**

- 1 विद्यार्थियों में विशय की गहन समझ विकसित होगी।
- 2 सामाजिक विकास के क्रम में साहित्य की भूमिका को समझ सकेंगे।
- 3 विद्यार्थियों को हिन्दी साहित्य का इतिहास में 'आदिकाल' का ज्ञान प्राप्त होगा।
- 4 विद्यार्थियों को हिन्दी भाशा के उद्भव एवं विकास की जानकारी प्राप्त होगी।
- 5 सामाजिक जागरूकता तथा जीवन संघर्ष के प्रति स्वस्थ दृष्टि विकसित होगी।

### **B.A. Hindi Literature Semester II**

- 1 विद्यार्थियों को साहित्य की विविध विधाओं का सामान्य परिचय प्राप्त होगा।
- 2 उपन्यासों के सामाजिक संदर्भों को समझ सकेंगे।
- 3 उनमें मानवीय मूल्यों की समझ विकसित होगी।
- 4 सामूहिक चेतना का विकास/बोध होगा।
- 5 नाटक के माध्यम से सामाजिक दायित्व बोध प्राप्त हो सकेंगे।

### **B.A. Hindi Literature Semester III**

- 1 विद्यार्थियों में हिन्दी साहित्य के प्रति रूचि निर्माण होगी।
- 2 उपन्यास विधा के माध्यम से विद्यार्थियों में पठन पाठन की प्रवृत्ति का निर्माण होगा।
- 3 विद्यार्थियों को हिन्दी साहित्य के मध्यकाल के इतिहास का ज्ञान प्राप्त होगा।
- 4 विद्यार्थियों को हिन्दी साहित्य में भक्ति के उद्भव एवं विकास की जानकारी प्राप्त होगी।
- 5 भारतीय काव्यशास्त्र के महत्व की जानकारी विद्यार्थियों को प्राप्त होगी।

### **B.A. Hindi Literature Semester IV**

- 1 साहित्य के प्रति विद्यार्थियों में रूचि निर्माण होगी।
- 2 विद्यार्थियों को संत साहित्य के महत्व तथा उसकी प्रासंगिकता की जानकारी प्राप्त होगी।
- 3 हिन्दी साहित्य में मध्यकाल के महत्वपूर्ण योगदान की जानकारी विद्यार्थियों को प्राप्त होगी।
- 4 हिन्दी साहित्य में निर्गुण तथा सगुण दोनों धाराओं के साम्य तथा वैशम्य से अवगत हो सकेंगे।
- 5 हिन्दी साहित्य के इतिहास को समझने की प्रवृत्ति का विकास होगा।

### **B.A. Hindi Literature Semester V**

- 1 विद्यार्थियों को हिन्दी साहित्य के इतिहास का ज्ञान प्राप्त होगा।
- 2 विद्यार्थियों को साहित्य की विविध विधाओं का सामान्य परिचय प्राप्त होगा।
- 3 साहित्यिक विधाओं के क्रमिक विकास से विद्यार्थी अवगत होंगे।
- 4 आधुनिक हिन्दी कविता के सामाजिक संदर्भों को समझ सकेंगे।

5 सामाजिक विकास के क्रम में साहित्य की भूमिका को समझ सकेंगे।

### **B.A. Hindi Literature Semester VI**

- 1 साहित्यिक विधाओं के क्रमिक विकास से विद्यार्थी अवगत होंगे।
- 2 आधुनिक हिन्दी कविता के सामाजिक संदर्भों को समझ सकेंगे।
- 3 सामाजिक विकास के क्रम में साहित्य की भूमिका को समझ सकेंगे।
- 4 आधुनिक हिन्दी कविता में फैंटेसी को समझ सकेंगे।
- 5 विद्यार्थियों को साहित्यिक विधाओं का सामान्य परिचय प्राप्त होगा।

### **BA Pali & Prakrit**

#### **BA Pali & Prakrit Semester I**

1. To study Jataka Tales.
2. To study Dhammapada.
3. To be oriented about first discourse by Buddha as Dhammachakkapavattana.
4. Orientation and study Pali Grammar.

#### **BA Pali & Prakrit Semester II**

1. To study Dhammadayad Sutta
2. Introduction to to AngulimalaSutta
3. Introduction to PanditVaggo
4. Orientation to remaining Pali Grammar

#### **BA Pali & Prakrit Semester III**

1. Introduction to RatthapalaSutta –
  2. Introduction to KesamuttiSutta –
  3. Introduction to SammaditthiSutta
  4. Study of further Pali Grammar
- 2) Lesson 17 to 19

#### **BA Pali & Prakrit Semester IV**

1. Introduction to BhariyaSutta
2. Study and Introduction to RatthapalaSutta – III
3. Study and Introduction to SammaditthiSutta – III
4. Study of Further Pali Grammar

### **BA Pali & Prakrit Semester V**

1. Further study of Mahaparinibbansutta
2. Further study of Kaludayithergatha
3. Introduction of SuttaPitaka
- 4 Introduction of VinayPitk

### **BA Pali & Prakrit Semester VI**

1. Further advance study to Mahaparinibbansutta
2. Understanding and study of Milindassapabbajja –I
3. Introduction to Abhidhamma Pitaka
4. Study of Further Pali Grammar

### **BA Economics**

#### **BA Economics Semester I**

1. Students will be able to learn the importance of Economics.
2. Students will able to learn to analyses the behavior of consumer in terms of demand for product.
3. Students will also be able to analyses demand by households and supply of goods and services by business firms.
4. They will also be able to understand interaction of demand and supply in various market structures.
5. They will gain and develop the skill to think practically in to economic domain like economist.

#### **BA Economics Semester II**

1. The students will be able to learn various concepts of GDP and relationship between National Income and welfare of people.
2. Students will able to understand factors determine domestic productivity, employment level of prices and interest rates.
3. Students will be able to apply basic concepts to analyses the situation of inflation and business cycles.
4. Students willable to evaluate the role of monetary .and fiscal policy of Govt. to fight inflation or to stabilize business cycles.
5. Students will have ability to understand the relationship between consumption function and investment in economy

#### **BA Economics Semester III**

1. This course will enable the students to analyse various trends in Banking and financial institutions.

2. Students will be able to compare different types of banking institutions for their efficiency in providing finance to the various categories of industry and businesses.
3. The study of technology of core banking and retail banking will make students to be employable in banking systems they will find opportunities to seek the jobs in banking and finance sector.
4. The students will be able to understand the role of various types of banking and financial institutions and shall be give suggestions.
5. The course will make students to understand major policy debates on monetary policy and shall be able to give suggestions.
- 6.

#### **BA Economics Semester IV**

1. This course will use appropriate analytical frameworks to review major trends in economic indicators in India in post-independence period.
2. It will examine various paradigm shifts and turning points in policy debates in India.
3. It enables students to examine sector specific policies and their impacts in shaping trends in key economic indicators in India.
4. And they will be able to give constructive suggestion for further development.
5. The course will be able to highlight major policy debates and evaluate the Indian empirical evidence to update the major changes of Indian Economy.

#### **BA Economics Semester V**

1. To explain development and economic growth theories international trade theories and related economic development theories.
2. Learn hardcore economic prescriptions to development concern hitherto to related to background like education, health, sanitation and infrastructure development, have found a place of pride in explaining with reference to various economics.
3. The students will be acquired with Economic concepts and models of international Trade as well as trade policies.
4. Student will become aware about international trade blocks and their importance.

#### **BA Economics Semester VI**

1. Learners will learn the practical aspect of money management.
2. Learners will enlighten their elder in managing the family income systematically.
3. Students will use their knowledge in developing appropriate buying strategies and in learning how to face the problem of consumer grievances etc.
4. They will be good manager of family income and also as wise customers in the market.

5. The tools of redressal of consumer grievances and the legal steps involved in customer protection have very useful sources of information in facing the problem as consumers and in fighting against unfair trade practice of the traders and manufacturers.

## **BA Political Science**

### **BA Political Science Semester I**

1. Understand the nature and relevance of Political Theory
2. Understand different concepts i.e. power, authority, rights, liberty, equality and justice
3. Understand present situation of concepts

### **BA Political Science Semester II**

1. Understand the paper on western political thought introduces the students to the classical ideas generated in the western world representation the ancient to the modern.
2. Understand fundamental concepts of Plato, Aristotle, Mill and Marx's philosophy
3. Understand these concepts in a critical analytical manner

### **BA Political Science Semester III**

1. Understand the Indian Constitution with its basic principles.
2. Know constitutional legal rights.
3. Understand different functionaries and their working established by the Constitution.

### **BA Political Science Semester IV**

1. Demonstrate knowledge of the Constitutional structure of democracy at state level.
2. Demonstrate knowledge of working of state institution of governance i.e. governor Center-state relation.
3. Show awareness to new trends like Panchayat raj and Right to Information.

### **BA Political Science Semester V**

1. Understand basic concepts in comparative politics.
2. Differentiate two democratic models.
3. Learn non-government functionaries like Political parties and pressure groups in presidential and Parliamentary set up.
4. Understand the political institutions are to be studied in light of the political process to gain an understanding of the dynamics of actual politics and policy making.



## **BA Political Science Semester VI**

1. Students shall learn history and major theoretical approaches in International Relations.
2. Course shall enhance students understanding conceptual international relations and reality.
3. Students shall learn role of different international Organizations maintaining peace.

## **BA Sociology**

### **BA Sociology Semester I**

1. The Concept of sociology was introduced to the students.
2. The students familiar with the basic concept in sociology
3. The nature and the structure and Indian society was studied
4. Contribution of sociologist in the process of social change was introduce .

### **BA Sociology Semester II**

1. This course intent to orient to certain basic perspectives in sociology
2. students know in details about culture, stratification and mobility and the deviant patterns and social control in society.
3. understanding the web of social relationship
4. Articulate a sociological perspective

### **BA Sociology Semester III**

1. Orienting the students to the basic sociological thought
2. Apply sociological theory to understand social phenomena
3. Studied of great master in sociology..
4. Addressing many current sociological issues and problems.

### **BA Sociology Semester IV**

1. The course intends to make the students understand the seminal ideas and thoughts reflected in the works of Indian Sociologists.
2. The course to help the students in understanding at the theoretical level the sociological issues concerning Indian society.
3. Modernity, personality, symbols such concepts familiar to the students

4. Role of social Re-formers in the society was introduced

### **BA Sociology Semester V**

1. Students learn the concept of inequality in the society.
2. familiar with problems among the Indian society
3. tribal issues and problems in India
4. Rural community in India.

### **BA Sociology Semester VI**

1. To introduced current social problem the society in India is facing at present.
2. students know the nature ,causes and consequences
3. To create scientific perspective while study of social phenomena
4. Measure of the social problems

## **BA History**

### **BA History Semester I**

Students will learn the pre-historic development of civilisation.

1. Students will study and learn Ancient Indian civilisation like The Harappan Civilization – Extent, Town Planning, Social, Religious Condition.
2. The students will also learn the history of state development in ancient period like , Chandragupat Maurya – Administration, Ashoka – His Conquests, Dhamma.
3. Students will also get knowledge about medieval history of India from AlauddinKhilji :Administrative Policy and study the Architecture of Sultanate period.

### **BA History Semester II**

1. In tyhis semester students will learn medieval history of India especially Establishment of Mughal Power – Babur , Shah Jahan – War of Succession , and Shivaji’s Coronation and Administration and Establishment of East India Company’s rule in India
2. Students will have exposure to kingdom, art and architecture in the period and also will learn the socio-cultural position of the country.

### **BA History Semester III**

1. In this period students will learn the later medieval history of India especilayy with the entry of East India Company. They will also learn, Battle of Buxar – Treaty of Allahabad, Dual Government of Lord Clive , Subsidiary Alliance of Lord Wellesley , Revolt of 1857 – Causes, Effects , Lord Lytton’s Administration

2. Students will learn the growth of British Empire in India and decline of Indian states
  3. The period will shade light upon the Indian crisis with the rise of British Empire and exploitation of resources.

#### **BA History Semester IV**

1. The semester offers the condition of India in the modern period. This section will also throw light upon the rise of nationalism in India against the British Empire. Students will learn, Establishment of Indian National Congress , Civil Disobedience Movement, Rashtriya Swaysevak Sangh (R.S.S.) Role in Nation building , Subhash Chandra Bose, I.N.A.
2. The section will develop historical approach to Indian students to learn the rise of nationalism and freedom movement.

#### **BA History Semester V**

1. The semester help students understand the Causes and consequences of Imperialism Russo – Japanese War of 1904-1905, International historical events like, Treaty of Versailles and their impact on contemporary world History Russian Revolution of 1917
2. The section offers Indian as well as world history of modern period.

#### **BA History Semester VI**

1. The semester offers the world history continued from the previous semester. Students will study and know, Hitler – Foreign Policy , U.N.O. – Structure, Achievements , NATO, SEATO, Warsaw Pact, Establishment of Israel
2. The final semester give students exposure to the latest world history up to the world War II and growth of nationalism with the independence to the many nation from imperialist nations.

### **B.A. Dr. AmbedkarThought**

#### **B.A. Dr. AmbedkarThought Semester I**

1. Students learnt the importance of social thought
2. They understood Varna system, its meaning, origin & Nature
3. They understood the Theory of origin of Caste
4. They understood the graveness and Nature of untouchability

#### **B.A. Dr. AmbedkarThought Semester II**

1. Students learnt Social change, Meaning & characteristics
2. They learnt Social movement: Meaning & characteristics
3. Understood Religion as a root cause of social problems in India
4. Knew the Criteria to judge the Religion

### **B.A. Dr. Ambedkar Thought Semester III**

1. Students learnt Meaning, Nature & characteristics of Vaidik writings
2. Understood the Ancient Vedic religion & Buddhist religion
3. Learnt the Dignity of laborer
4. Understood the clutches of Untouchability & Slavery

### **B.A. Dr. Ambedkar Thought Semester IV**

1. Learnt about Khoti system
2. Understood Dr. Ambedkar's study on water management
3. Learnt about Gandhian model
4. Understood Economic democracy

### **B.A. Dr. Ambedkar Thought Semester V**

1. Learnt the Nature & Scope of Political thought
2. Understood Liberalism
3. Understood Nation and Nationalism
4. Learnt about Political & Social integration

### **B.A. Dr. Ambedkar Thought Semester VI**

1. Understood Social democracy
2. Learnt about Parliamentary democracy
3. Knew about Foreign policy of state
4. Became acquainted with Political philosophy of Dr. Ambedkar

## **BA Psychology**

### **BA Psychology Semester I**

1. Introducing psychology, to understand approaches to psychology, field of psychology theoretical and applied.
2. Teaching cognitive process gestalt principles, and Thorndike's laws of learning
3. To explain to the students what is motivation and emotion according to the syllabus.
4. Teaching intelligence and personality subject of psychology to change student

5. Student understanding practical of substitution learning, knowledge of result, achievement motivation, personality test

### **BA Psychology Semester II**

1. What is a social psychology introducing students
2. Attitude and prejudice are a part of social psychology. Explain to the students.
3. Deep learning to change pro social behaviour and aggression.
4. To understand communication types, process and interpersonal communication.
5. Student understanding practical of aggression scale, prejudice scale, social maturity scale, koh's block design test.

### **BA Psychology Semester III**

1. Student teach psychopathology introduction of normality and abnormality.
2. Understanding of the psychological disorder anxiety, conversion reaction, ADHD
3. Explaining mood disorder changes in detail to student.
4. Explaining the detail of psychological disorder changes to the students and giving information on the treatment modality on them.
5. Student understanding practical positive mental health, depression scale, Muller lyre illusion, life event scale.

### **BA Psychology Semester IV**

1. Students introducing statistical method and and psychological testing.
2. Student teach data grouped and ungrouped, frequency distribution, graphical representations of data.
3. Explaining to student in detail how to do data analysis.
4. Teaching chi square and t test
5. Introducing to psychological testing.
6. Student understanding practical occupational stress index, adjustment inventory, stress scale, DAT/DBDA.

### **BA Psychology Semester V**

1. Student understanding organizational behaviour
2. How important job satisfaction is in our life explained detail student.

3. To understand work motivation theories specially Maslow's theory, Herzberg's two factor theory
4. Effect of stress work life to give systematic information to the students about these changes.
5. Student understanding practical mental work and fatigue, job satisfaction, depth perception

### **BA Psychology Semester VI**

1. Student introduce what is counseling and positive psychology
2. Student understand counseling an art.
3. Role of counseling technique some of play, art, music, dance, yoga and meditation.
4. Challenges before counselor, premarital counseling to student.
5. Understanding importance of well-being.

### **BA Music**

#### **BA Music Semester I**

1. Student will gain know;ledge in Shudha swar (Clear vowels), Sargam and Lakshana Geet, Yaman, Kafi, Tilang, Bhairav, Vilambit Khyal, Tal with Dugun.
2. Student will have enough practice of all the above elements to perfect his base for further music study.

#### **BA Music Semester II**

1. Student will learn other elements of music like Bhupali, Alhaiya bilawal, Vilambit Khyal , Tarana, Tal with Dugun , Tilwada, zaptal, Dhamar
2. The practical knowledge of all the above elements of music will help students gain knowledge about the aspect of the subject.

#### **BA Music Semester III**

1. The student will gain knowledge and expertise in
  - a. Rabindra Sangeet
  - b. Karnatic Sangeet (Saptal and Music styles), Study of theoretical details of Ragas (Bihag, Desh, Bageshree, Bhimpalasi. Deshkar) prescribed for practical course and their comparative study.
2. The semester also offers Comparative study of Bhatkhande and Paluskar notation syste which will help students differentiate the different elements.

3. Students Will also learn the following technical terms:- Vrunda vadan, Vaggeyakar, Merits and demerits of Vaggeykar, Naandi, Haveli Sangeet, Raagmala, Kuku Bhed, Geet-Gandharva-Gaan, Gayak-Nayak

#### **BA Music Semester IV**

1. Students Will learn tDakshinatya taal system.
2. They also study Study of theoretical details of Ragas (Malkauns, Jounpuri, Hamir, Kedar, Purvi) prescribed for practical course and their comparative study.
3. Students will be given theoretical knowledge through Essay topics:
  - Importance of Music festivals/conferences.
  - Remix and Fusion
  - Music Therapy
4. They will also gain General knowledge of various folk songs:Baul, Bhatiyali, Lawani, Bharud, Kirtan

#### **BA Music Semester V**

1. Students will learn Classification of Rag
  - That - rag vargikaran
  - Dashavidhi rag vargikaran (By Pt. Sharang Dev)
2. Theu will also study theoretical details of ragas prescribed for practical course (Chhayanat, Durga, Puriya dhanashri, Darbari kanada, Miya Malhar ) and their comparative study.
3. Students will gain ability in Analysis of the styles of the following Gharanas and their history:
  - Gwalior, Agra, Patiyala
  - Development of Gayaki /Gatkari styles of instruments music, History and development of the musical instruments offered (only for students of instrumental music )
4. Students will be learning Samvad, Anuvad and Vivad and their relation with shruties.

## **BA Music Semester VI**

1. Students will gain knowledge in Critical study of all the Gharanas of Tabla: Lakhnow, Farrukhabad and Ajarada with their 'Baaj',and it's appropriate examples
2. They will also gain knowledge in Definition and knowledge of application of the following terms: Farmaishi and Kamali (फरमाइशी व कमाली) Ten -Pranas of Tal (तालाचे दशप्रान), Aamad (आमाद),Rao(रौ),Ladi (लडी).
3. Knowledge of different Layakaries viz:- Ku-Aad( कुआड), Biaad (बिआड) Different Tal (Rhythm) Instruments and their co-rektion.
4. Comparative study of Tabla solo v/s accompaniment.

## **B.Com Compulsory English**

### **B.Com Compulsory English Semester I**

Students will

1. Learn and get inspired from the achievements of great personalities
2. Develop language and communication skills
3. Enhance the skills at business communication skills
4. Learn to develop emotional intelligence
5. Develop writing skills

### **B.Com Compulsory English Semester II**

Students will

1. Enhance writing skills through weaving ideas and narrating an experience
2. Learn interview techniques
3. Enhance moral and ethical understanding of life and world
4. Get motivated and strength to face challenge in the modern world through the stories of great personalities

### **B.Com Compulsory English Semester III**

Students will

1. Develop business writing skills
2. Learns soft skills, etiquette and manners
3. Get acquainted with the new genres of writing in the era of digitalization
4. Develop reading and comprehension skills
5. Develop more mature understanding of life



## **B.Com Compulsory English Semester IV**

Students will

1. Enhance language and communication skills through group discussion
2. Develop writing skills through dialogue and summary writing
3. Develop comprehension skills
4. Get new perspectives about life and the world through the text of representative writers
5. Develop poetry reading skills

## **B.Com Marathi**

### **B.Com Marathi Semester I**

1.बी .कॉम सत्र -1 या अभ्यासक्रमामध्ये शब्दसाधना या पाठ्यपुस्तकांतर्गत गद्य विभागात बाबासाहेब आंबेडकर , छत्रपती शाहू महाराज , राष्ट्रसंत तुकडोजी महाराज , गाडगेबाबा या महापुरुषांचा विचारांचा अभ्यास विद्यार्थ्यांनी केला व त्यांचे विचार समाजात आजही किती उपयोगी ठरतात याचे प्रत्यंतर विद्यार्थ्यांना घडले .

2.अभ्यासक्रमात लावलेल्या कथांच्या आधारे कथा या वांग्मय प्रकाराच्या शैली वैशिष्ट्यांचा अभ्यास विद्यार्थ्यांनी केला .

3.पद्य विभागात संत ज्ञानेश्वर , वामन पंडित , केशवसुत , विठ्ठल वाघ , अनुराधा पाटील , हेमंत कुमार कांबळे यांच्या कवितेचा विद्यार्थ्यांनी आवडीने अभ्यास केला . व त्या कवींच्या कवितेची वैशिष्ट्ये लक्षात घेतली .

4.व्यवहारिक मराठीतून म्हणींचे संकलन करण्यास विद्यार्थ्यांना सांगण्यात आल्यामुळे अनेक मराठी म्हणी विद्यार्थ्यांना माहिती पडल्या.

5.मुलाखत लेखनातून विद्यार्थ्यांना प्रत्यक्ष मुलाखत कशी घ्यावी व मुलाखतीला जाताना कोणती काळजी घ्यावी याचे ज्ञान झाले.

### **B.Com Marathi Semester II**

1.सत्र दोन च्या अभ्यासक्रमात विद्यार्थ्यांना गोपाळ गणेश आगरकर , स्वामी विवेकानंद , वि. दा सावरकर , पंजाबराव देशमुख , यांच्या विचारातून शैक्षणिक नैतिक सामाजिक व सांस्कृतिक तसेच मानवी मूल्यांची ओळख विद्यार्थ्यांना करून देण्यात आली .

2.पद्य विभागात संत एकनाथ , बा .सी मर्ढेकर , वामन निंबाळकर , वसंत आबाजी डहाके , प्रसन्नजीत गायकवाड , लखन सिंह कटरे यांच्या कवितेचा विद्यार्थ्यांनी आवडीने आस्वाद घेतला व त्यातील आशय सौंदर्य जाणून घेतले .

3.जाहिरात लेखनातून विद्यार्थ्यांनी जाहिरात कशी तयार करावी याविषयी माहिती मिळाली व विद्यार्थ्यांना काही जाहिराती प्रत्यक्षपणे तयार करण्यासाठी प्रकल्प देण्यात आला

4.वाक्यप्रचारांचा संग्रह करण्याचा गृहपाठ अंतर्गत मूल्यमापनाच्या आधारे घेऊन विद्यार्थ्यांच्या सर्जनशील जाणीवा विकसित करण्यात आल्या .

5. अंतर्गत मूल्यमापनाच्या आधारे विविध पद्धतीची प्रकल्प विद्यार्थ्यांना देण्यात आले व त्यातून विद्यार्थ्यांच्या कौशल्याला वाव मिळाला .

### **B.Com Marathi Semester III**

1.बी .कॉम सत्र तीनच्या शब्दसाधना भाग -2 या पाठ्यपुस्तकातून विद्यार्थ्यांमध्ये मराठी भाषेच्या समृद्धीची जाणीव प्रभावीत झाली .

2.वाणिज्य क्षेत्रातही भाषेद्वारे रोजगाराच्या संधी उपलब्ध होऊ शकतात याची माहिती विद्यार्थ्यांना झाली .

3.अभ्यासक्रमात समाविष्ट करण्यात आलेल्या पाठाद्वारे विद्यार्थ्यांच्या भाषिक कौशल्याचा विकास झाला .

4.व्यवहारिक मराठीच्या माध्यमातून विद्यार्थ्यांना रोजगाराच्या संधी उपलब्ध होऊ शकतात याविषयीची जाणीव जागृती नेमलेल्या अभ्यासक्रमातून करण्यात आली .

5. पद्य विभागातील कवितांमधून विविध कवींचा परिचय विद्यार्थ्यांना झाला .कवितेच्या माध्यमातून जीवनाकडे बघण्याचा दृष्टिकोन विद्यार्थ्यांना मिळाला .

### **B.Com Marathi Semester IV**

Name of the Book - शब्दसाधना भाग-2

1.वाणिज्य शाखेतील भाषेच्या विद्यार्थ्यांमध्ये जीवनाभिमुख आणि व्यवसायाभिमुख दृष्टिकोन वाढीला लागून बदलत्या काळाची आव्हाने पेरण्यासाठी आजचा विद्यार्थी या अभ्यासक्रमातून सक्षम झाला .

2.या अभ्यासक्रमात प्राचीन मराठी साहित्य पासून ते पर्यावरण संरक्षण राष्ट्रीय एकात्मता सोबतच महापुरुषांचे विचार व देशाच्या पोशिंग्याला लागणारा शेती विषयक सुधारणेपर्यंतच्या विचारांचा त्याचप्रमाणे वैज्ञानिक दृष्टिकोनाचा समावेश असल्यामुळे विद्यार्थ्यांमध्ये नवीन जीवन जाणीव निर्माण होण्यास मदत झाली .

3.या अभ्यासक्रमात कंपनी उद्योगधंद्याच्या प्रगतसाठी लागणारी कौशल्य आत्मसात करण्याचे तंत्र व मंत्र देणार्या पाठांचा समावेश असल्यामुळे विद्यार्थ्यांमध्ये स्वयंरोजगाराची भावना वाढीस लागली .

4. आजच्या स्पर्धा परीक्षेच्या युगात स्पर्धा परीक्षेत विचारण्यात येणार्या प्रश्नांसाठी व्यावहारिक मराठीचा अभ्यासक्रम विद्यार्थ्यांना उपयुक्त ठरला .

5.विद्यार्थ्यांमध्ये वाचनशैली लेखन शैली संवादशैली भाषिकशैली वृद्धिंगत करण्याकरिता हा अभ्यासक्रम उपयुक्त होता.

## **B.Com Hindi**

### **B.Com Hindi Semester I**

- 1 विद्यार्थियों को अनुवाद के सैद्धांतिक और व्यावहारिक जानकारी प्राप्त होगी।
- 2 विद्यार्थियों का वाचन कौशल विकसित होगा।
- 3 मार्गिक नक्शा विप्लेशन, पारिभाषिक षब्दावली की उपयोगिता से अवगत हो सकेंगे।
- 4 उनमें मानवीय मूल्यों, बुराइयों, कमियों, खूबियों के प्रति संतुलित दृष्टि का विकास होगा।
- 5 एकांकी के माध्यम से अभिनय कौशल को सीख पाएंगे।

### **B.Com. Hindi Semester II**

- 1 ऑनलाइन आवेदन तथा ग्राहक सेवा केंद्र से अवगत हो सकेंगे।
- 2 सोशल मिडिया के षिष्टाचारों से अवगत होंगे।
- 3 मुहावरे और लोकोक्तियों का दैनंदिन जीवन में प्रयोग कर सकेंगे।
- 4 विज्ञापन लेखन जैसे रोजगारान्मुख क्षेत्र में विद्यार्थी निपुण होंगे।
- 5 अनिवार्य हिन्दी के प्रति विद्यार्थियों में रूचि निर्माण होगी।

### **B.Com. Hindi Semester III**

1. दृष्य और श्रव्य साक्षात्कार में तुलना कर सकेंगे।
- 2 पद संक्षिप्तियों का दैनंदिन जीवन में प्रयोग कर सकेंगे।
- 3 साक्षात्कार के नियमों को तथा प्रश्नवाली निर्माण प्रक्रिया को समझ सकेंगे।
- 4 अनिवार्य हिन्दी की गद्य एवं पद्य विधाओं के कथ्य तथा षिल्प को समझ सकेंगे।
- 5 गद्य एव पद्य में निहित मानवीय मूल्यों को अपने भीतर आत्मसात कर सकेंगे।

### **B.Com. Hindi Semester IV**

1. जीवन वृत्त के प्रारूप निर्माण तथा प्रकारों को बता सकेंगे।
- 2 संस्था संगठन की संक्षिप्तियों का दैनंदिन जीवन में प्रयोग कर सकेंगे।
- 3 किसी एक घटक पर गति षब्द चित्र अर्थात् पॉवर पॉइंट प्रेजेंटेशन तैयार कर सकेंगे।
- 4 वेबसाइट एनालिसिस कर सकेंगे।
- 5 गद्य एव पद्य में निहित जीवन मूल्यों, भारतीय संस्कृति को अपने भीतर आत्मसात कर सकेंगे।

## **B.Com Pali Semester**

### **B.Com Pali Semester I**

- 1) To Understand Sunsumar Jatak
- 2) ) To Study Pandit Vaggo
- 3) To Know Tannha Vaggo I
- 4) To Study Pali Grammar

### **B.Com Pali Semester II**

- 1) To study Arhant Vaggo
- 2)To study Dhammikther
- 3)To know Ubbiritheri
- 4)Expertise in Pali Grammar

### **B.Com Pali Semester III**

- 1)To Learn vak Sutta
- 2)To Learn Muchalinda Katha
- 3)To Learn Bodhi Katha
- 4)To gain expertise in Pali Grammar

### **B.Com Pali Semester IV**

- 1) To Study Abhayrajkumarsutta
- 2)To Study Nidankatha – I
- 3)To Study Bodhisattassa Patubhavo – I
- 4)To Gain expertise in Pali Grammar

## **B.COM PROGRAMME OUTCOMES**

### **B.Com Semester I**

1. he student will be able to relate the concept of skill development and its importance. 2  
The student will be able to explain importance of financial institution and regulation in India and importance of financial markets

3 the student will be able to identify the nature of transaction events and will be able to record the financial transaction in the books

4 student will be able to classify fundamental problems of rent economy and use divine analysis and indifference curves and forecasting techniques

### **B.Com Semester II**

1. Student will be demonstrate and understanding of statistics by creating frequency distribution as per the statistical series and major the central tendency standard deviation quartile coefficient of skewness
2. student will be able to established relationship between cost and output in short and long term run and differentiate between various market structure and concept of macroeconomics and national income
3. the student will be able to understand the concept of commercial services and their practical importance and emergency emerging trends in aviation and hospital ladies services and banking and insurance sector
4. student will be able to relate the concept of skill development and its importance and solving techniques and multiple approaches to creativity and to relate importance of communication skills for interpersonal communication and able to explore various skill development avenues

### **B.Com Semester III**

1. Student will be able to gain knowledge about consignment higher purchase system and installment system and procedure of issue of shares and preparation of companies final account and the company act 2013
2. 2 the student will be able to demonstrate nature and functions of money and concept of inflation and depletion and identify their role and monetary policy and fiscal policy get knowledge about public finance and types of taxation and student will gain knowledge about recent trends money market and public finance
3. the student will be able to get familiarities with the types of characteristics of company article of association and memorandum of association and frame the prospectus of the company and identified different types of shares and debentures and to gain knowledge of management and administration of the company
4. the student will be able to get familiarities with basic concept of income tax calculate the tax on salary house property and knowledge about calculation of super animation for and house property and other source and will be calculate the tax on it
5. the student will be able to get familiarities with concept of holistic development and able to manage their time effectively and identify causes of stress and will be held in managing them and able to demonstrate the concept of rituality and will be able to analyse the relationship between spirituality and health and improve their academic and overall performance in a holistic way

## **B.Com Semester IV**

1. Student will be able to get knowledge of commercial bank and identify causes of non-performing assets to demonstrate core banking and will be able to differentiate between different types of cards to identify role of monetary policy and fiscal policy the student will get knowledge about bank and customer relationship and will be able to open and type of account in bank the student will familiar eyes with work of Central Bank and will be able to calculate different ratios of credit control
2. the student will be able to get familiarities with concept of organisation behaviour unable to distinguish different types of organisation culture and evaluate organisational culture on its performance and able to demonstrate the significance of motivation as well as moral and identify the factor responsible to organisational change
3. student will be able to demonstrate the rights and duties of company secretary and to gain knowledge about the company at and to state powers of SEBI and to develop the knowledge about the appointment and removal of the company auditor and aware about the procedure of winding up of the companies
4. student will be able to gain knowledge about functioning of bank and will be able to prepare final account of banking and also final account as per IRDA regulation 2002 general insurance company and recognise the factor influence the valuation of shares and Goodwill by different method and to gain knowledge about process of liquidations of a company and to prepare liquidator final statement and able to evolve at the financial statement of banking and generally insurance companies

## **B.Com Semester V**

1. understand basic nature and importance of human resource management
2. analyze the current theory and practice of recruitment and selection.
3. realize the importance of performance management system in enhancing employee performance.
4. recommend actions based on results of the compensation analysis and design compensation schemes that are cost effective, that increase productivity of the workforce, and comply with the legal framework.
5. understand role of modern HRM in meeting challenges of changing business environment
6. understand the accounting and control of material and labour cost.

7. develop ability to understand classification, allocation, apportionment and absorption of overheads in cost determination; under and over absorption of overheads; treatment of various item of overheads.
8. develop ability to calculate the cost of products, jobs, contracts, processes and services after understanding the basic concepts and processes involved in them.
9. understand cost accounting book keeping systems and reconciliation of cost and financial account profits

## **B.Com Semester VI**

1. Students will have capability to understand government policies and will enable informed participation in economic decision making, thus improving their employment prospects and career advancement.
2. Understand thoroughly the conceptual framework of Management Accounting; identification of differences between different forms of accounting—Financial, Cost and Managerial; distinction between cost control and cost reduction.
- 3 understand the concept of marginal cost and marginal costing; preparation of income statements using absorption and variable costing; learning of cost-volume-profit analysis and break-even analysis using mathematical and graphical approaches; and the application in businesses.
- 4: understand the concept of relevant and irrelevant costs and make decisions related to different business situations using marginal costing and differential costing techniques.
- 5: understand budgetary control system as a tool of managerial planning and control; ability to prepare various types of budget. Ability to understand standard costing system as a tool of managerial control; calculation of variances in respect of each element of cost and sales; control ratios.
- 6: understand management accounting issues of Responsibility accounting, Divisional performance measurement and Transfer pricing

## **BSC Compulsory English**

### **BSC Compulsory English Semester I**

1. To facilitate the learners in acquiring listening and speaking competence.
2. To assist the learners in independent language comprehension and production.

3. To make the students aware about the different communicative functions of English.
4. To improve skills and proficiency for being employed as teachers, state government employees, civil aviation, engineering and medico-related industry, defence, commerce and taxation sector.
5. To be able to speak, write, read and listen flawlessly in person and through the electronic mode in English.

### **BSC Compulsory English Semester II**

1. To understand views of others, mediate contradictory views/ disagreements, reaching conclusion in groups / group discussions.
2. To understand and use basic skills of the English language for applying it in the job assigned /employment accepted / profession undertaken.
3. Understand the paragraph, prose, poetry and communicative skills.
4. Apply the four skills of language in his daily inter-personal communications.
5. Formulate/ compose his own sentences and able to speak English Language.

### **BSC Marathi**

#### **BSC Marathi Semester I**

1. अभ्यासक्रमातील नेमलेल्या पाठ्यक्रमामुळे मराठी भाषेच्या समृद्धीची जाणीव निर्माण झाली.
2. प्राचीन , अर्वाचीन, साहित्याच्या आकलन, आस्वाद व चिकित्सतून विद्यार्थ्यांची मानवी संवेदनशीलता, चारित्र्यशिलता मूल्यधिष्ठितता जागृत झाली .
3. समाजसेवेची व राष्ट्रप्रेमाची जाणीव जागृती निर्माण झाली.
- 4 विज्ञान आणि मानवी जीवनव्यवहाराची सांगड घालून विद्यार्थ्यांना रोजगाराभिमुख बनविण्यास मदत झाली.
- 5 . स्वतंत्र लेखन शैली विकसित झाली.

#### **BSC Marathi Semester II**

1. अभ्यासक्रमात नेमलेल्या पाठात समाजसुधारकांनी मांडलेल्या विचारामुळे चारित्र्यशिलता, विचारसंपन्नता निर्माण झाली .
2. मराठी भाषेवर प्रभुत्व निर्माण होऊन वक्तृत्वशैली विकसित होण्यास मदत झाली .
3. मराठी व्याकरणासंदर्भात व भाषाविज्ञानसंदर्भात भाषिक समज स्पष्ट होण्यास मदत झाली .



4. व्यवसायिक कौशल्याची प्रेरक वाट गवसली .
5. व्यावसायिक कौशल्य विकसनातून समाजाभिमुख वैज्ञानिक दृष्टिकोन विकसित झाला .

## **B.Sc. Hindi**

### **B.Sc. Hindi Semester I**

1. समाचार लेखन के सैद्धांतिक और व्यावहारिक पक्ष की जानकारी विद्यार्थियों को प्राप्त होगी।
2. विद्यार्थी साक्षात्कार के नियमों तथा प्रश्नवाली निर्माण प्रक्रिया को समझ सकेंगे।
3. स्ववृत्त के प्रारूप निर्माण, प्रकार तथा विशेषताओं को बता सकेंगे।
4. पारिभाषिक शब्दावली की उपयोगिता को समझ सकेंगे।
5. हिन्दी साहित्य के गद्य एवं पद्य विधाओं के कथ्य तथा षिल्प को समझ सकेंगे।

### **B.Sc. Hindi Semester II**

1. विद्यार्थी प्रतिवेदन की विशेषताओं तथा प्रारूप निर्माण प्रक्रिया को समझ सकेंगे।
2. अनुवाद के अर्थ परिभाषा तथा प्रकारों की जानकारी दे सकेंगे।
3. देवनागरी लिपि की वैज्ञानिकता को समझ सकेंगे।
4. विज्ञापन लेखन जैसे रोजगारान्मुख क्षेत्र में विद्यार्थी निपुण होंगे।
5. हिन्दी साहित्य के गद्य एवं पद्य विधाओं के कथ्य तथा षिल्प को समझ सकेंगे।

## **B.Sc. Mathematics**

### **B.Sc. Mathematics Semester I**

1. Basic concept of complex analysis.
2. Use of matrices to solve system of linear equations, the concept of Eigen value & Eigen vectors and method to find it.
3. Theorems on roots of equations and how to find solutions of equations.
4. How to solve Diophantine equation, to find graphs, roots, and primes integer.
5. Expansion of functions, partial derivatives, mixed partial derivatives, and total differentiation.
6. How to find Jacobian of function in several variables and extreme values of function of two variables.
7. Integration of algebraic rational, trigonometric, and irrational functions.

### **B.Sc. Mathematics Semester II**

1. The concept of Geometry (line, Plane, Circle, Sphere, cone, cylinder).
2. How to solve first order exact differential equation, first order linear differential equation.
3. Study Bernoulli's differential equation and higher order linear differential equation
4. Difference equations.
5. Vector calculus (Gradient, Divergence, Curl), line Integral, work done, conservative vector field.
6. How to use double integration to find area. Solve problems on vector integration (Surface integral, Volume integral) and Improper Integrals.

### **B.Sc. Mathematics Semester III**

1. Pfaffian differential forms and equations and their solutions.
2. Compatible system of first order differential equations, Charpit's Method, Jacobi's Method.
3. Partial differential equations of second order and their solutions.
4. Concept of calculus of variations.
5. Group theory and Ring theory.

### **B.Sc. Mathematics Semester IV**

1. Archimedean property, Neighborhoods, Limit point of a set, Bolzano – Weierstrass Theorem.
2. Riemann integration, Sequence, and Infinite Series.
4. Concepts of equilibrium of coplanar forces, virtual work, catenary.
5. Motion in a plane, differential equation of an orbit, Inverse square law of force Virial theorem.

### **B.Sc. Mathematics Semester V**

1. Functions of complex variable, topology on complex variables, analytic functions, mobius transformations and mapping of regions under some special transformations.
2. Complex integration, Taylor's theorem, Laurent's theorem, concept of residue
3. Evaluation of real definite integration and improper definite integral.
4. Metric spaces, countable sets, uncountable sets, compacts sets and connected sets.
5. Boolean functions, Boolean forms and free Boolean algebra, values of Boolean expressions, and Boolean functions.
6. Graph theory, matrix representation of graphs, trees.

### **B.Sc. Mathematics Semester VI**

1. Vector spaces, Linear transformations, applications to the theory of ordinary linear differential equations, matrix associated to linear maps and vice versa.
2. Linear operations in matrices, Rank and Nullity of a matrix,

3. Inner product spaces, Normed linear space, Gram-Schmidt orthogonalization process, Application to reduction of quadrics.
4. Solution of Algebraic and transcendental equations, Interpolation
5. Numerical differentiation and integration and Numerical solution of Ordinary differential equation

## **BSc. Physics**

### **BSc. Physics Semester I**

#### **Theory**

1. To understand types of motion existing in nature
2. Students gain knowledge and skill in elasticity, viscosity and surface tension.
3. They analyze Newtonian mechanics and dynamics.
4. To understand electrical laws of nature: coulombs law, Gauss law, electric field, electric potential.
5. Apply the knowledge to solve problems based on above properties to strengthen their basics.
6. Students gain knowledge of electrostatic and dielectrics.
7. They gain knowledge of time varying field transformer and a.c. circuits.
8. Apply the knowledge to solve problems based on above properties to strengthen their basics.

#### **Practical**

1. Students develop experimental skill in elasticity, viscosity, surface tension, electrostatics, and various a.c. circuits.
2. They analyze experimental limitations and precautions.
3. They become skillful to design and perform experiments with good accuracy.
4. Students are able to develop moral maturity and ethical behavior.
5. Students are able to learn about the environment and sustainability process.

### **BSc. Physics Semester II**

#### **Theory**

1. Students gain knowledge of free, forced and damped oscillations.
2. To understand physical behavior of real gases and transport phenomena in gases
3. They understand the kinetics of gases and thermodynamics laws.
4. Apply the knowledge to solve problems based on above properties to strengthen their basics.
5. To introduce constituents of universe: galaxy, stars, solar system, composition of constituents of universe.
6. Students gain knowledge of gravitations and astrophysics.
7. They gain knowledge of magnetism and magnetostatics.
8. Apply the knowledge to solve problems based on above properties to strengthen their concepts.

#### **Practical**

1. Students are able to self-direct a life-long learning system.
2. Students are able to learn knowledge application.
3. Students develop experimental skills in gravitations, astrophysics, magnetism and magnetostatics.

4. They analyze experimental limitations and precautions.
5. They become skillful to design and perform experiments with good accuracy.

### **BSc. Physics Semester III**

#### **Theory**

1. To understand concept of wave propagation. Classification of waves. Basic terminology of music science.
2. Students gain knowledge of Sound waves and acoustics.
3. They understand the design of various kinds of power supply.
4. Apply the knowledge to solve problems based on above properties to strengthen their basics.
5. To understand the basic concepts of interference (Newton's rings and Michelson's interferometer)
6. Students gain knowledge of interference, diffraction and polarization.
7. They gain knowledge of e.m. wave.
8. Apply the knowledge to solve problems based on above properties to strengthen their concepts.

#### **Practical**

1. Students develop experimental skills in of acoustics, rectifiers, interference, diffraction and polarization.
2. Students are able to learn analytical, scientific reasoning and problem solving.
3. Students are able to gain information / digital literacy.
4. They analyze experimental limitations and precautions.
5. They become skillful to design and perform experiments with good accuracy.

### **BSc. Physics Semester IV**

#### **Theory**

1. To Introduce crystal Physics.
2. Students gain knowledge of solid-state physics.
3. They understand the design, principle and working of LASER.
4. Apply the knowledge to solve problems based on above properties to strengthen their basics.
5. To understand concept of molecular spectroscopy: vibrational, rotational and electronic spectra of molecules. And its application.
6. Students gain knowledge of solid-state electronics.
7. They gain knowledge of molecular spectroscopy.
8. Apply the knowledge to solve problems based on above properties to strengthen their concepts.

#### **Practical**

1. Students are able to self-direct a life-long learning system.
2. Students are able to learn knowledge application.
3. Students develop experimental skills in of cell structure and applications of LASER and various solid state electronic devices.
4. They analyze experimental limitations and precautions.
5. They become skillful to design and perform experiments with good accuracy.

## **BSc. Physics Semester V**

### **Theory**

1. To understand Vector model of atoms, quantum no, Zeeman and stark effect.
2. Students gain knowledge of atomic physics and free electron theory.
3. They understand the basics of statistical physics.
4. Apply the knowledge to solve problems based on above properties to strengthen their basics.
5. To understand need and developments of quantum mechanics, wave particle duality, De Broglie hypothesis, Heisenberg uncertainty principle
6. Students gain knowledge of quantum mechanics.
7. They gain knowledge of nanotechnology.
8. Apply the knowledge to solve problems based on above properties to strengthen their concepts.

### **Practical**

1. To disseminate the practical knowledge of photon related experiments.
2. To disseminate the practical knowledge of atomic spectra.
3. Students are able to build strong leadership qualities and develop team spirit.
4. Students are able to learn to become better and effective citizens of the country.
5. Provide opportunities for scientific study, experimentally.

## **BSc. Physics Semester VI**

### **Theory**

1. Students gain knowledge of relativity and nuclear physics.
2. They understand the basics of biophysics.
3. To know Bio-potentials of human body and basic principles of measuring signals of human body.
4. Apply the knowledge to solve problems based on above properties to strengthen their basics.
5. Students gain knowledge of amplifiers and fiber optics.
6. To know Communication: basic concepts of analogue communication (A.M., F.M. AND P.M.)
7. To know Number system: different types and its interconversion, digital numbers and system, and their arithmetic. Various logic gates
8. Apply the knowledge to solve problems based on above properties to strengthen their concepts.

### **Practical**

1. Students develop experimental skills in amplifiers, fiber optics, digital circuits and communication devices.
2. They analyze experimental limitations and precautions.
3. Students are able to develop creative and critical thinking.
4. Students are able to develop effective communication.
5. They become skillful to design and perform experiments with good accuracy.

## **B.Sc. Zoology**

### **B.Sc. Zoology Semester I**

#### **Paper – I Life and Diversity of Animals - Nonchordates (Protozoa to Annelida)**

1. General characters and classification of Protozoa, Porifera, Helminthes, Annelida.

2. Structure and reproduction of Paramecium, Plasmodium, Sycon, Obelia, Ascaris,
3. Life cycle of Plasmodium, Obelia, Ascaris, Taenia solium.
4. Parasitic Protozoans of Man- Mode of infection and its control, parasitic adaptations in helminthes.
5. Trochophore larva- significance
6. Canal system in sponges, corals and coral reef formation, Vermiculture and its importance.

### **Paper – II Environmental Biology**

1. Atmosphere (Hydrosphere, Lithosphere): Major zones and its importance, energy sources, Energy flow in an ecosystem.
2. Ecosystem - Definition and types - pond ecosystem, Food chain, food web and ecological pyramids.
3. Biodiversity and its conservation , causes of reduction , Hot spots in India, Wildlife conservation acts (1972 and 1984), national parks and sanctuaries .
4. Sources, effect and control measures - air pollution, water pollution, noise pollution.
5. Toxic effects of heavy metals
6. Bioaccumulation and biomagnifications

### **Practical (Outcomes)**

By the end of this programme, the students will be able to -:

1. Study and Classify Life and Diversity of Animals – Nonchordates with the help of museum specimens, permanent slides, diagrams.
2. Prepare temporary and permanent slides.
3. Estimate DO, free CO<sub>2</sub>, pH, total hardness of water sample.
4. Study of pond ecosystem – analyze plankton quantitatively.
5. Observe animals in natural habitat of National park and Sanctuary.

## **B.Sc. Zoology Semester II**

### **Paper – I Life and Diversity of Animals – Nonchordates (Arthropoda to Hemichordata)**

1. General characters and classification up to classes: Arthropoda, Mollusca, Echinodermata, Hemichordata.
2. Study the Morphology and anatomy of Cockroach, Pila, Asterias, Balanoglossus.
3. Insects as Vectors , Social behavior in honey bees & Pearl formation in Mollusca
4. Study the larval forms -crustacea, Mollusca, Echinoderms.
5. Affinities of Balanoglossus.

### **Paper – IV Cell Biology**

By the end of this programme, the students will get knowledge and they will understand the:

1. Ultra-structure of prokaryotic and eukaryotic cell ,
2. Structure and function of Cell organelles.
3. Oxidative phosphorylation, Glycolysis and Krebs's cycle & Electron Transport Chain and terminal oxidation.
4. Giant chromosomes: Lamp-brush and polytene chromosome

5. Cell cycle and Mitosis, Meiosis (different phases and significance), Cellular ageing and cell death, Elementary idea of cancer and its causative agents.

### **Practical (Outcomes)**

By the end of this programme, the students will be able to understand:

#### **Section A**

Study and classify Life and Diversity of No chordates.

Prepare temporary and permanent slides.

#### **Section B: Cell Biology**

1. Study the ultra-structure of prokaryotic cell & eukaryotic cell.
2. Observe osmosis in human RBCs, Barr body in blood smear.
3. Prepare and observe the mitotic cell division in onion root tips, meiosis in • Tradescantia bud/ Grasshopper testis by squash method .
4. Study the salivary gland chromosome in Chironomous larva.
5. Prepare and observe the mitochondria in buccal epithelium/ lip mucosa .
6. Use ocular micrometer to measure micro objects.

### **B.Sc. Zoology Semester III**

#### **Paper – 1 Life and Diversity of Animals - Chordates (Protochordata to Amphibia)**

1. General characters and classification up to classes: Protochordata, Pisces, Amphibia, & Agnatha
2. The Morphology and anatomy of Herdmania, Amphioxus.
3. Retrogressive metamorphosis of ascidian tadpole of Herdmania.
4. Scales of fishes, origin of paired fins ,migration and accessory respiratory organs and Embryology.
5. Parental care and Neotony in Amphibia .
6. Frog Embryology & Development of respiratory organs & Aortic arches in frog .

#### **Paper – II Genetics**

1. Mendelian Principles & laws. Interaction of genes, quantitative genetics & extra nuclear genome .
2. Cytoplasmic inheritance, Linkage and crossing over.
3. Concepts of genes & Genetic disorders in human.
4. Sex determination.
5. Gene mutations & Lethal genes. Population genetics, Genetic counseling & Applied genetics

### **Practical(Outcomes)**

#### **Section A :Life and Diversity of Animals – Chordates (Protochordata to Amphibia )**

1. Identify, classify and distinguish the characters and adaptive features of animals from Urochordata , Cephalochordata ,Cyclostomata , Pisces & Amphibia .
2. Describe Digestive system ,Reproductive system &Brain of locally available culturable Fish.

3. Explain the histology of Amphioxus and embryology of Frog from the permanent slides .
4. Prepare the permanent stained slide .

### **Section B : Genetics**

1. Understand monohybrid and dihybrid ratio
2. Study of normal human karyotype ( Normal male and female)
3. Study characters and karyotypes of Syndromes.
4. Study the genetic traits .

## **B.Sc. Zoology Semester IV**

### **Paper - I Life and Diversity of Animals – Chordates (Reptilia, Aves and Mammals)**

1. Identify, classify and distinguish the characters and adaptive features of animals from Reptilia, Aves& Mammals.
2. understand Poison apparatus, biting mechanism, snake venom and its importance.
3. understand Comparison of Ratitae and Caranitae, Flight adaptations and migration .
4. understand theories of evolution & genetic basis of evolution.
5. understand Adaptations in animals.
6. understand Races in Man
7. understand Comparative account of aortic arches and heart in Reptiles, Birds and• Mammals
8. understand embyology of Mammals& chick understand Stem cells .
9. understand Biological clock : Diurnal and rhythmic behavior in birds and mammals
10. understand the Role of pheromones in reproductive behavior

### **Paper II - Molecular Biology and Immunology**

1. Structure & properties of DNA, RNA as genetic material ; DNA replication.
2. Recombination in Bacteria.
3. Genetic code & Protein synthesis.
4. Gene regulation.
5. Concepts of immunity, Structure, types and functions of Antigen& Antibody.
6. Antigen-antibody interaction .
7. Types of immune response.
8. Complement system, Cytokines.
9. Autoimmunity and immunodeficiency.

### **Practical (Outcomes)**

### **PRACTICAL – Section A : Life and Diversity of Animals – Chordates (Reptilia, Aves and Mammals)**

1. Understand Identify, classify and distinguish the characters and adaptive features of animals from
2. Chordates (Reptilia, Aves and Mammals)
3. skeleton of Rabbit and Fowl .
4. chick embryology from W.M.
5. Filoplume & skin of Bird, Skin of Mammal.



## **Section B: Molecular Biology and Immunology**

### **Molecular Biology**

1. perform staining of DNA and RNA from blood smear of various animals.
2. understand basic laboratory instruments and equipments.
3. perform calculations of Molarity and normality of solutions .
4. Isolate Genomic DNA from any available source.

### **Immunology**

1. Determine blood groups in humans.
2. Perform Antigen – Antibody interaction by double diffusion method (Ouchterlony).
3. Study of histological slides of organs of immune system.
- 4.

## **B.Sc. Zoology Semester V**

### **Paper I General Mammalian Physiology**

1. Importance of vitamins & Enzymes-biocatalyst, Glands and hormones associated with digestion. and
2. explain the physiology of digestion , respiration, circulation
3. Blood pressure, E.C.G. & working of Heart.
4. Composition of blood, respiratory pigments in mammals.

### **Paper II - Applied Zoology**

1. Establish their own aquaculture unit, aquarium .
2. Culture prawn and oyster (for pearl).
3. Identify insects pest (agriculture and veterinary).apply ways to control them
4. Understand the types of Silkworm, their Life cycle and economic importance.
5. Establish their own sericulture , apiculture, lac culture units.

### **Practical (Outcomes)**

#### **Section A: General Mammalian Physiology – I**

1. Detect the action of salivary amylase on starch.
2. Detect the presence of carbohydrates, proteins, Lipids, Vitamin A and Vitamin C in given sample.
3. Measure lung capacity .
4. Prepare slide of Haemin crystal.
5. Total WBC and RBC count from blood.
6. Understand histology of digestive and lungs.

#### **Section B : Applied Zoology –I (Aquaculture and Economic Entomology) Aquaculture**

1. Collect and identify Freshwater edible fishes& Aquarium fishes .
2. explain the digestive, reproductive systems and brain with pituitary of culturable fishes & the Gonosomatic index
3. Fabricate and set up own aquarium
4. Mount the Scales of fishes, zooplankton .

## **B.Sc. Zoology Semester VI**

## **Paper – I General Mammalian Physiology**

1. E.M. structure ,types of Neurons & conduction of nerve impulse .
2. Ultrastructure & properties of striated muscle .
3. Muscle contraction- sliding filament theory.
4. Structure & function of uriniferous tubule.
5. Normal and abnormal constituents of urine, dialysis.
6. Structure and functions of endocrine glands.
7. Oestrous and menstrual cycle ,male and female sex hormones , Contraceptives .
8. Causes of infertility ,In-vitro fertilization.

## **Paper - II Applied Zoology II ( Biotechniques, Microtechnique, Biotechnology, Bioinformatics and Biostatistics)**

1. Sterilization methods, Separation of biomolecules; Chromatography ( Elementary idea) ,Electrophoresis. Principles of colorimeter and spectrophotometers.
2. The microtechnique procedure.
3. Histochemical staining techniques for carbohydrates, proteins and lipids .
4. Recombinant DNA technology, application of biotechnology: Insulin and vaccine production.
5. Bioinformatics: Definition, Basic concepts ,importance and its role in life sciences & Bioinformatics databases.
6. Biostatistics.

### **Practical (Outcomes)**

1. To detect of urea, albumin, sugar and creatinin from urine .
2. To count the sperms from given semen sample .
3. To describe the endocrine glands of culturable fishes
4. To identify and explain the histology of kidney, endocrine glands, uterus, placenta,• nerve fibre, muscles of mammals.
5. To separate amino acids by paper chromatography
6. To separate proteins by electrophoresis technique
7. To develop skill in microtechnique.
8. To demonstrate the carbohydrates, proteins and lipids by histochemical methods
9. To determine mean, mode, median from a given biostatistical data
10. To represent statistical data graphically using computers.

## **B.Sc. Botany**

### **B.Sc. Botany Semester I**

#### **Theory (outcomes)**

1. Understand the diversity among Cyanobacteria, Bacteria, Viruses and Algae.

2. Know the systematic morphology and structure of Cyanobacteria, Bacteria, Viruses and Algae.
3. Understand the life cycle pattern of Cyanobacteria, Bacteria, Viruses and
4. Algae.
5. Understand the useful and harmful activities of Cyanobacteria, Bacteria, Viruses and Algae.
6. Know the utilization of kinds of Biofertilizers in Organic Farming.
7. Understand the Biodiversity of Fungi.
8. Know the Economic Importance of Fungi.
9. Understand the features and use of Lichens.
10. Know the terminologies in Plant Pathology.
11. Understand the scope and importance of Plant Pathology.
12. Understand the techniques in Mushroom Cultivation.

### **Practical (Outcomes)**

1. Understand working and precaution while handling microscope.
2. Understand the basic technique in lab e.g. Slide preparation and Section cutting.
3. Identify Bacterial, Cyanobacterial, Algal, Fungal, Lichens and
4. Bryophytic plant.
5. Understand and identify the Algae, Bryophytes, Fungi, Plant Pathogenes and Lichens under natural habitat.
6. Identify Rhizobium, Azatobacter, PSB and Azolla.
7. Know the various tools, spawn preparation method and beds for mushroom cultivation.

### **B.Sc. Botany Semester II**

#### **Theory (outcomes)**

1. Understand the paleobotany and geological time scale.
2. Identify the different type of fossils and understand the process of fossilization.
3. Explain the classification of pteridophytes and gymnosperms.
4. Describe the economic importance of pteridophytes and gymnosperms.
5. Criticize the concept of heterospory and seed habit.
6. Know the various types steles in pteridophytes.

7. Discuss morphology and anatomy of fossile gymnosperm -Cycadeoidea.
8. Understand the physical and chemical properties of soil.
9. Learn the morphology and modification of plants.
10. Compare the type's inflorescence and fruits.

### **Practical (Outcomes)**

1. Describe the various parts of flower.
2. Identify the anatomy of plants material by making temporary mount.
3. Identify the different types of fossils.
4. Identify various Plant specimens.
5. Understand and Identify the morphological characters of plants in natural environment.
6. Identify types of roots, stem, leaves, inflorescence, flower and fruits in the field visit.
7. Assay the physical and chemical properties of soil
8. Identify the commercial aspects of flowering plants.

### **B. Sc. Botany Semester III**

1. Understand the fossil angiosperm Sahanianthus and Enigmocorpon.
2. Describe general taxonomic rule of plant identification, nomenclature and classification.
3. Acquire the basic knowledge of taxonomy and made aware with local flora.
4. Criticize the classification of angiosperms.
5. Understand the merits and demerits of systems of classification.
6. Know the types and significance of pollination.
7. Understand the male and female gametophytes, fertilization and embryogenesis.
8. Learn the scope of landscaping, indoor gardening and various house plants.

### **Practical (Outcomes)**

1. Analyze the floral formula of monocot and dicot families.
2. Understand and identify the plants under natural environment.
3. Calculate germination percentage of pollen grains.
4. Study of anther, ovule and embryos from permanent micro preparation.
5. Study of tissues, V. B. of stem and root.
6. Understand the technique of temporary and double stain micro preparation.
7. Study of various horticultural crops.

### **BSc. Botany Semester IV**

1. Analyze the morphology of chromosome organization.
2. Explain the plant cell-division and its significance.
3. Evaluate the biostatic formulas.
4. Understand the method of plants breeding.
5. Objectives and application of plant breeding statistical methods used in biology.
6. Understand the seed storage, seed banks, and seed viability seed testing
7. in seed technology.
8. Describe the laws of Mendelism and gene interactions.
9. Summarize the theories of linkage and crossing over.
10. Discuss the types of mutations and its application in crop –improvement.

### **Practical(Outcomes)**

1. Study of cell organelles with the help of photographs and slides.
2. Study of mitosis and meiosis in plants.
3. Calculate mean, median and mode and standard error.
4. Study of seed viability and breaking of dormancy.
5. Solve the Mendel's law of inheritance through color beads.
6. Solve interaction of gens from the given data.
7. Study the method of vegetative propagations and soil sterilization for
8. plant nursery.

### **BSc. Botany Semester V**

#### **Theory (outcomes)**

1. Understand plant water relation.
2. Summarize the ascent of sap, transpiration and mineral uptakes.
3. Summarize the cycle of respiration, photosynthesis, and mechanism of
4. fermentation.
5. Summarize the nitrogen metabolism, plant movements, photoperiodic and biological clock.
6. Understand the roll of micro and macronutrients.
7. Explain the hydroponics farming.
8. Define and explain about ecology branches and its significance.

9. Summarize the climatic, edaphic and physiographic factors.
10. Define the components of ecosystems.

### **Practical (Outcomes)**

1. Perform major physiology experiments on permeability, plasmolysis, transpiration, ascent of sap, paper chromatography photosynthesis etc.
2. Perform various minor physiology experiments.
3. Study the movements in plants.
4. Study the soil less growth in plants.
5. Perform various ecology experiments.
6. Understand ecological adaptations of plants.
7. Study the methodology of preparation of vermin-compost.

## **B.Sc. Botany Semester VI**

### **Theory (outcomes)**

1. Know the lipid as biomolecule and basics of enzymology.
2. Discuss plant tissue culture technique and its application
3. Discuss the advantages and disadvantages of genetic-engineering.
4. Understand the herbal technology in relation to drugs, cosmetics and natural dyes.
5. Know the phytogeography and climatic regions of India.
6. Explain morphology utilization and chemical-constituents of different plants.
7. Know the principal, types and application of instruments.
8. Define and understand the pharmaceuticals biological sources.

### **Practical (Outcomes)**

1. Perform the activity of enzymes.
2. Perform principles and working of instruments.
3. Study the structure of vectors.
4. Study the method of preparation of rose-water, hibiscus oil and natural dyes.
5. Study the morphology, utilization and chemical constituents of various plants.
6. Study the plants of ethnobotanical importance.
7. Perform the principal, types and application of instruments.
8. Study the drug adulteration and drugs from biological sources.

## **BSc. Computer Science**

### **BSc. Computer Science Semester I**

#### **Theory (outcomes)**

1. Illustrate and explain the basic computer concepts and programming principles of C language.
2. Develop C programs to solve simple mathematical and decision making problems.
3. Develop C programs to solve simple engineering problems using looping constructs.
4. Develop C programs to demonstrate the applications of derived data types such as arrays, pointers, strings and functions.
5. Understand basic concepts and terminology of information technology.
6. Have a basic understanding of personal computers and their operations.
7. Be able to identify issues related to information security.

#### **Practical (Outcomes)**

8. Develop, Debug and Execute programs to demonstrate decision making and looping constructs in C.
9. Develop, Debug and Execute programs to demonstrate the applications of arrays in C.
10. Develop, Debug and Execute programs to demonstrate the applications of functions in C.

### **BSc. Computer Science Semester II**

#### **Theory (outcomes)**

1. Describe the procedural and object oriented paradigm with concepts of streams, classes, functions, data and objects.
2. Understand dynamic memory management techniques using pointers, constructors, destructors, etc
3. Describe the concept of function overloading, operator overloading, virtual functions and polymorphism. Classify inheritance with the understanding of early and late binding, usage of exception handling, generic programming.
4. Demonstrate the use of various OOPs concepts with the help of programs Develop solutions for a range of problems using objects and classes.
5. define the system development life cycle. Conducts research on existing systems.
6. Develop plans for the new system, make the feasibility study about the system.
7. Explore the technical risks involved in the system's and technical possibilities. Scheduling with using GANTT and PERT techniques.

#### **Practical (Outcomes)**

1. Programs to demonstrate the implementation of constructors, destructors and operator overloading.
2. Apply fundamental algorithmic problems including type casting, inheritance, and polymorphism.

### **BSc. Computer Science Semester III**

#### **Theory (outcomes)**

1. Understand the concept of Dynamic memory management, data types, algorithms, Big O notation.
2. Understand basic data structures such as arrays, linked lists, stacks and queues.
3. Describe the hash function and concepts of collision and its resolution methods
4. Solve problem involving graphs, trees and heaps
5. Apply Algorithm for solving problems like sorting, searching, insertion and deletion of data
6. describe the general architecture of computers
7. Describe, contrast and compare differing structures for operating systems, understand and analyze theory and implementation of: processes, resource control (concurrency etc.), physical and virtual memory, scheduling, I/O and files.

### **Practical (Outcomes)**

1. Implement basic data structures such as arrays and linked list.
2. Programs to demonstrate fundamental algorithmic problems including Tree Traversals, Graph traversals, and shortest paths.
3. Implement various searching and sorting algorithms.
4. Programs to demonstrate the implementation of various operations on stack and queue.

## **BSc. Computer Science y Semester IV**

### **Theory (outcomes)**

1. .Able to solve real world problems using OOP techniques.
2. Able to understand the use of abstract classes.
3. Able to solve problems using java collection framework and I/o classes.

### **Practical (Outcomes)**

1. Able to develop multithreaded applications with synchronization. • Able to develop applets for web applications.
2. Able to design GUI based applications

## **BSc. Computer Science Semester V**

### **Theory (outcomes)**

1. understand the programming algorithm, process, and structure
2. understand and identify the fundamental concepts of object-oriented programming
3. understand and use the concepts of objects, primitive value, message, method, selection control structure, repetition control structures, object reference, container, and method parameter
4. 6. understand the impact of Java and VB.NET on business
5. To describe data models and schemas in DBMS
6. To understand the features of database management systems and Relational database.
7. To use SQL- the standard language of relational databases.
8. To understand the functional dependencies and design of the database.
9. To understand the concept of Transaction and Query processing.

### **Practical (Outcomes)**

1. know how to write and run a complete program



2. understand and identify the importance of object-oriented programming for the Internet based electronic commerce.

## **BSc. Computer Science Semester VI**

### **Theory (outcomes)**

1. Enhance the knowledge and understanding of Database analysis and design.
2. Enhance the knowledge of the processes of Database Development and Administration using SQL and PL/SQL.
3. Enhance Programming and Software Engineering skills and techniques using SQL and PL/SQL.
4. Preparation of background materials and documentation needed for Technical. Master using lexical analyzer and parser generator tools.
5. Master building symbol tables and generating intermediate code.
6. Master generating assembly code for a RISC machine. 4. Master programming in Java.
7. Be familiar with compiler architecture.
8. Be familiar with register allocation.
9. Be exposed to compiler optimization

### **Practical (Outcomes)**

1. Use the Relational model and how it is supported by SQL and PL/SQL
2. Use the PL/SQL code constructs of IF-THEN-ELSE and LOOP types as well as syntax and command functions
3. Solve Database problems using Oracle 9i SQL and PL/SQL. This will include the use of Procedures, Functions, Packages, and Triggers.

## **B.Sc. Chemistry**

### **B.Sc. Chemistry Semester I**

#### **Paper I**

1. To understand the atomic structure based on quantum mechanics and explain periodic properties of the elements.
2. To understand the structure and bonding in covalent molecules and ionic solids and predict the structure of molecules.
3. To understand the properties of s block elements and hydrogen bonding in compounds.
4. To understand the properties of noble gases and structure, bonding and applications of Xenon fluorides (XeF<sub>2</sub>, XeF<sub>4</sub>, XeF<sub>6</sub>). Structure and bonding in XeOF<sub>2</sub> and XeOF<sub>4</sub>.
5. To understand the properties of p-block elements and about their Hydrides.
6. To understand food adulteration and how to detect them.

## **Paper II**

1. To understand thermodynamics and thermochemistry: fundamental concepts
2. To understand statements of first law of thermodynamics, definition of internal energy & enthalpy, Heat capacity, Standard states, Standard enthalpy of formation, Heat of reaction, Average bond energy and bond dissociation energy.
3. To understand Gaseous State – about kinetic theory of gases, about different types of molecular velocities, definitions of collision diameter, collision number and mean free path. To understand Liquid intermolecular forces and properties of liquid.
4. To understand surface chemistry, Catalysis and Colloidal state parameters such as adsorption, characteristics, types, and applications of catalysts.

## **Practical**

1. To enable the students to understand the methods of chemical analysis such as detection of acidic and basic radicals and detection of food adulterants.
2. To enable the students to understand the various concepts in physical chemistry like heat of solution, heat of ionization of weak acid, viscosity, surface tension etc. by doing experiments pertaining to these concepts.

## **Paper II**

1. To understand 2<sup>nd</sup> law of thermodynamics and the terms involved in it.
2. To understand what free energy functions is, systems of variable compositions, terms which involved in it and its calculation.
3. To understand Phase Equilibria- phase rule, its applications, and Liquid-Liquid mixtures.
4. To understand nuclear chemistry and molecular structure.

## **Practical**

1. To predict the outcome and mechanism of some simple organic reactions, using a basic understanding of the relative reactivity of functional groups, melting point.
2. To enable the students to understand the various concepts in physical chemistry like integral heat of solution, critical solution temperature, rate constant of hydrolysis etc. by doing experiments concerned.

## **BSc. Chemistry Semester III**

### **Paper I**

1. To understand Valence Shell Electron Pair Repulsion theory and Molecular Orbital theory with its example.
2. To understand Chemistry of elements of first, second and third transition series.
3. To understand Chemistry of Lanthanides and actinides.
4. To understand errors in Chemical Analysis: Accuracy and Precision, Absolute and Relative errors, Mean, Median, Average and Standard deviations, and significant figures.
5. To understand Chemistry of Soil, what different parameter affect soil and its nutrients.

### **Paper II**

1. To understand Orientation of Activating and Deactivating substituents on aromatic structures.
2. To understand structure method of preparation physical and chemical properties of alkyl halides and polyhalogen compounds.
3. To understand preparation, nomenclature physical and chemical properties of alcohols, dihydric alcohol, trihydric alcohol, and phenols.
4. To understand preparation, nomenclature physical and chemical properties of Aldehydes and Ketones.

5. To understand preparation, nomenclature physical and chemical properties of carboxylic acids and their derivatives such as acid chlorides, anhydrides, esters, amides.

### **Practical**

1. To enable students to understand methods of complete analysis of organic compounds with different functional groups.
2. To enable the students to understand the methods of quantitative analysis by redox complexometric and acid-base titrations.

## **BSc. Chemistry Semester IV**

### **Paper I**

1. To understand Coordination compounds -nomenclature, VBT and MOT of complexes.
2. To understand Isomerism in coordination compounds and oxidation and reduction.
3. To understand Principles of photometry: it's law and types of colorimeter and spectrophotometer.
4. To understand Separation Techniques: Chromatography, Ion- Exchange and Solvent Extraction.
5. To understand Inorganic Polymers structure, properties and uses.

### **Paper II**

1. To understand Solid and their classification, Laws of crystallography, definition of Space lattice, Unit cell, Bravais lattices, crystal systems and determination of crystal structure of NaCl, KCl and CsCl.
2. To understand Electrochemistry about Electrical transport and transport number.
3. To understand Spectroscopy- Rotational and Vibrational Spectroscopy.
4. To understand Quantum Chemistry and their properties.

### **Practical**

1. To enable the students to understand the methods of quantitative analysis by gravimetric analysis and qualitative by paper chromatography.

2. To gain an understanding of instrumental methods of analysis by conductometry.

#### BSc. Chemistry Semester V Paper I

1. To understand preparation, nomenclature, structure, physical and chemical properties of aliphatic and aromatic nitro and amino compounds.
2. To understand aromaticity in heterocyclic compounds of five membered six membered and fused ring compounds.
3. To understand Quantitative analysis of carbon, hydrogen, Nitrogen, Sulphur and halogens in organic compounds and empirical and molecular formula.
4. To understand organometallic compounds with magnesium, lithium and zinc their preparations and reactions.
5. To understand electromagnetic spectrum and infrared absorption spectroscopy.

#### **Paper II**

1. To understand Electrochemistry and to know about their parameters.
2. To understand types of reversible electrodes, Nernst equation, calculations of it.
3. To understand applications of emf measurements.
4. To understand Quantum Chemistry and Molecular Orbital Theory.
5. To understand Photochemistry and Raman Spectroscopy.
6. To understand Colligative properties and Macromolecules.

#### **Practicals**

1. To enable the students to understand the Quantitative analysis of glucose, amide and carboxylic group and saponification value of oil, Molecular mass by Rast method and Viscometric method, dissociation constant by potentiometer.
2. To learn the verification of Beer-Lambert law, optical activity using polarimeter.

## **BSc. Chemistry Semester VI**

### **Paper I**

1. To understand metal ligand bonding in Transition Metal Complexes and electronic spectra of Transition Metal Complexes.
2. To understand magnetic properties of Octahedral and Tetrahedral complexes with respect to CFT.
3. To understand Thermodynamic and Kinetic stability of metal complexes.
4. To understand Organometallic Chemistry and metal carbonyl.
5. To understand Bioinorganic Chemistry.
6. To understand Hard and Soft Acids and Bases.

### **Paper II**

1. To understand NMR spectra of organic molecules.
2. To understand Malonic ester and acetoacetic ester -preparation and reaction
3. To understand Carbohydrate chemistry, structure and reactions of glucose.
4. To understand Structure of disaccharide and polysaccharide without involving structure determination.
5. To understand structure and reactions of amino acids, proteins and nucleic acids. Fats oils and detergents.
6. To understand Synthetic dyes, drugs and polymers with suitable examples

1. To enable the students to understand separation and analysis of the two-component organic mixture using  $\text{NaHCO}_3$  and  $\text{NaOH}$ .
2. To know the preparation of complexes of copper, nickel and iron.