



“Dissemination of Education through Knowledge, Science and Culture”

-Shikshanmaharshi Dr. Bapuji Salunkhe

**Shri Swami Vivekanand Shikshan Santha's Kolhapur**

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**NAAC Reaccredited B++ with CGPA 2.76 AISHE:C11096**

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**Internal Quality Assurance Cell (IQAC)**

**Program Outcomes  
and  
Course Outcomes**

# **UNDER GRADUATE (U.G.)**

## **Programme Outcomes**

### **BACHELOR OF ARTS (B. A.)**

Student seeking admission for B.A. programme is expected to inspire encourage with following quality which help them in their future life to achieve the expected goals.

1. To realize of human values.
2. To create sense of social service.
3. To prepare them responsible and dutiful citizen.
4. To acquire critical temper
5. To create ability.

### **BACHELOR OF COMMERCE (B.COM)**

Students who have taken admission to this program of B.Com are expected to concentrate upon the following outcomes.

1. Commercial sense.
  2. Develop managerial skills.
  3. Entrepreneurial skill.
  4. Budgeting policy.
  5. Human Resources Management.
  6. Develop Numerical ability.
- Well versed with business regularity framework.

### **BACHELOR OF SCIENCE (B. Sc.)**

Students taking admission to this program of B.Sc. are expected to get equipped with following outcomes:

1. Explaining the basic scientific principles and methods .
2. Inculcating scientific thinking and awareness among the student.
3. To make able to communicate with others in regional language and in English.
4. Ability to handle the unexpected situation by critically analyzing the problem. e. Understanding the issues related to nature and environmental contexts and sustainable development.

## **Master of Science (M. Sc.)**

M. Sc. degree program translates to making a significant investment in one's professional career.

1. To the enhanced career prospects that can be gained by taking a Master of Science.
2. To create valuable personal skills and fulfil a crucial prerequisite to PhD study.
3. Candidates normally have to do independent research and present a thesis as requirement for graduation.
4. d) An understanding of professional, ethical, legal, security and social issues and responsibilities.

## **Master of Arts (M.A.)**

1. The students acquire in depth knowledge in the field of social sciences, literature and humanities which make them sensitive and sensible enough to solve the issues related with mankind.
2. The postgraduates will be acquainted with the social, economical, historical, geographical, political, ideological and philosophical tradition and thinking of their respective subjects.
3. The program also empowers the post-graduates to appear for various competitive examinations or choose the any post graduate or research programme of their choice.
4. The M. A. program enables the students to acquire the knowledge with human values framing the base to deal with various problems in life with courage and humanity.
5. The students will be ignited enough through the knowledge of the special PG programme to think and act over for the solution of various issues prevailed in the human life to make this world better than ever.
6. Through the PG programme the students will come know about research in their respective subject. It may also provide the information to the students for collection of Data, enquiry, primary and secondary methods of collection of data, classification and tabulation of data.
7. Students get knowledge of various research methods and can realize the importance of research to find solutions of a specific issue.

## **Master of Commerce (M. Com.)**

The post graduate program provides the students advanced knowledge in the field of business and management and also enables the students to acquire the basic skills required for carrying out business activities, research, stock market operations, accounting practices, etc. The program also provides them with adequate knowledge and skill to provide consultancy services in finance and marketing. Similarly after completion of the program students can confidently prepare for NET, SET, and other competitive examinations of their choice.

1. To understand the concepts of co-operation and co-operative movements
2. To acquire the knowledge about market, marketing information system and transportation in 21st century.
3. To learn the basic management concepts and process
4. To acquire the knowledge about the modern trends in the management
5. To apply the techniques of micro and macro-economics for decision making in job/business
6. To understand the concepts and procedures in cost accounting system and make use of expert knowledge of costing data for decision making and control
7. To acquire research skills.

## **Department of English**

### **Learning Outcomes**

After completing the graduation in English, student will be able to:

LO1: improve the basic skills regarding learning of language

LO2: develop and enrich creative and innovative writing skills

LO3: develop and enrich creative and innovative writing skills

LO4: able to increase the considerable number of diction for daily communication

LO4: analyse, interpret and evaluate any important task in daily life  
LO5: develop critical and evaluative skills

LO6: acquaint with major and useful terms, theories and concepts in literature and history

LO7: apply grammatical rules while communication  
LO8: develop and enrich communicative competence

LO9: communicate at official and working places with ease and comfort  
LO10: make overall and exhaustive development of their personality

LO11: attain the skills like proof reading, editorial writing and research writing.

## Programme Outcomes

### **After completion of this Programme students will be able to:**

PO1: Apply and Demonstrate practical knowledge of the subject in diverse sectors

PO2: Elucidate and explain the basic and fundamental concepts, critical terms and theories, advanced concepts and techniques in the programme.

PO3: Comprehend, Comment and appreciate literature in developing aesthetic, emotional, mental, moral, intellectual skills of an individual and creating a healthy society.

PO4: Relate the implications as well as influences of environmental, socio-economic, socio-cultural and socio-political literature to the daily life and how they can provide solutions to the social, political, economic, environmental and cultural issues through written articles, novels, dramas, poetries and stories to spread the message of equality, nationality, social harmony, ecosystem, fraternity, brotherhood, etc.

PO5: Evaluate and analyze critically the literature in relation to social issues and appreciate the strength, understand the challenges and suggest the required and beneficial improvements for better results.

PO6: Apply multiple paradigms of literature and social sciences to make the life of human beings more joyful and meaningful.

PO7: Increase the participation in various social, political, environmental and cultural activities.

PO8: Establish an independent identity and construct a multifaceted and overall personality to enrich learning skills

PO9: Apply knowledge of literature in connection with social, economic, cultural, political and environmental approaches to cultivate human and moral values which generate responsibility and positive attitude for leading well balanced life for nation building.

PO10: Enrich and demonstrate development of communication skills like, listening, speaking, reading and writing which will help to express ideas, thoughts and views effectively.

## **Programme Specific Outcomes**

**On completion of graduation programme, students are able to: \**

PSO1: Compose literary works.

PSO2: Critically appreciate a literary work of art.

PSO3: Use communication skills effectively in personal, social and working life.

PSO4 Communicate in English fluently as well as write appropriately.

PSO5 Inculcate moral and human values for transformation of behaviour.

PSO6 Write clearly, effectively, imaginatively and to accommodate writing skills to create text.

PSO6 Analyse the structure of English words, study etymology of words, to study texts from the point of view of morphology, phonology, grammar, syntax and semantics.

PSO7 Recognize and comprehend various aspects of English language.

## **Course Outcomes**

After completion of these courses students will be able to:

### **B.A. Part I**

#### **Ability Enhancement Compulsory Course (AECC 1) (Compulsory English) (CBCS)**

CO1: Implement use of vocabulary effectively

CO2: Motivate use of English for effective oral communication  
CO3: Inculcate human values with the help of the course

CO4: To improve four basic skills of English language learning (LSRW)

CO5: Appreciate prose and poetry on various levels.  
CO6: Discuss themes of poetry and prose texts.

### **B. A. Part II**

#### **Ability Enhancement Compulsory Course (AECC) (CBCS) English for Communication (Compulsory English)**

CO19: Highlight growth and development of oral and written communication skills in English.

CO20: Learn using language skills in personal, academic and professional life for presentation

CO21: Increase confidence and other soft skills as required in various jobs  
CO22: Set an example of broad human and cultured perspective.

CO23: Read, understand and comprehend prose and poetry  
CO24: Implement a drastic change and increase in vocabulary

**(Discipline Specific Core) (DSC-C5)**

**English (Paper III) (Semester III) Literature and Cinema (CBCS)**

CO25: Explain basic terminology in film

CO26: Discuss the characteristics of film adaptations  
CO27: Enable and enhance active vocabulary

CO28: Study the text and film from the point of view of adaptation  
CO29: Present a critical analysis of a work of art

CO30: Explore the central ideas and issues in film

**(Discipline Specific Core) (DSC-C6)**

**English (Paper IV) (Semester III) Partition Literature (CBCS)**  
CO31: Highlight the hidden dimensions of the partition to the students  
CO32: Present various stories and incidents during Partition

CO33: Give the dark side and violence appeared in works during partition

CO34: Discuss importance of peace, non-violence and brotherhood in the pre-independence as well as the contemporary scenario.

CO35: Explore human values that appear in literary works  
CO36: Show increasing reading capability.

**B.A. Part III Compulsory English**

**Ability Enhancement Compulsory Course (CBCS) ENGLISH FOR COMMUNICATION**

CO37: Interact in English in oral and written forms, in their routine life and working places.

CO38: Show essential skills in face job interviews confidently and effectively.  
CO39: Exemplify soft skills required at workplaces and in real life.

CO40: Maintain respect to others' opinions and views to develop democratic attitude in group discussions

CO41: Recite and comprehend poetry and prose passages. CO42: Explore values of humanity.

### **INTRODUCTION TO LITERARY CRITICISM (CBCS) Discipline**

#### **Specific Elective**

#### **Semester V (Paper VII) (DSE- E11) & Semester VI (Paper XII) (DSE-E136)**

CO43: Study the concepts of literary criticism

CO44: Highlight theorists' contributions to the branch of literary criticism. CO45: Discuss about multiple critical and literary movements.

CO46: Study themes and poetic devices in poetry CO47: Focus contribution of the contemporary critics CO48: Study and apply the definitions of critical terms

### **ENGLISH DRAMA (CBCS) Discipline Specific Elective**

#### **Semester V (Paper IX) ((DSE – E13) & Semester VI (Paper XIV) (DSE –E138)**

CO49: Explore basic forms and several types of drama. CO50: State ideological or socio-political relations of drama. CO51: Perform interesting dialogues and actions on the stage

CO52: Enable the learners' of understanding human nature through the characters appearing in dramatic work

CO53: Elucidate various elements and movements in history of the drama CO54: Study, analyse and observe characters in dramas

### **ENGLISH NOVEL (CBCS)**

#### **Discipline Specific Elective Semester V (Paper X) ((DSE – 14) & Semester VI (Paper XV) (DSE – E139)**

CO55: increase capability of reading a text

CO56: State political or socio-cultural issues in the novels. CO57: Understand various elements of the novel.

CO58: Write several short stories, articles and short stories CO59: Study about the rise



and development of novel CO60: Observe and study the characters in the novel

**English Special ENGLISH POETRY (CBCS) Discipline Specific Elective**

**Semester V (Paper VIII) (DSE – E12) and Semester VI (Paper XIII) (DSE – E137)**

CO61: Focus rise and development of the poetry in English from the days of Shakespearean times to the Digital age.

CO62: Recite and interpret the poems with implied meaning

CO63: Observe comparative sense between Western and Eastern poetic traditions as well as between literary movements.

CO64: Sing poems along with proper pronunciation, music and rhythm. CO65: Apply appropriate vocab while interacting.

CO66: Motivate an increase in literary and linguistic capability.

**LANGUAGE AND LINGUISTICS (CBCS) Discipline Specific Elective**

**Semester V – Paper XI (DSE - E15) & Semester VI – Paper XVI (DSE -E140)**

After completion of this course students will be able to:

CO67: Study the basic concept of communication.

CO68: Find similarities and dissimilarities between many languages. CO69: Study the fundamentals of grammar

CO70: Understand importance of words and phrases.

CO71: Study basic elements and types of clauses.

CO72: Differentiate and identify the types of sentences and formal or functional label.

**B.Sc. Part I**

**Ability Enhancement Compulsory Course (AECC –A) (Compulsory English)**

**(CBCS) English for Communication**

CO73: Focus the effective use of diction and words

CO74: Choose English for effective written communication CO75: Comprehend human values through English language

CO76: Learn the basic skills of English language (LSRW) effectively. CO77: Share daily

routine in English language

CO78: Learn describing objects, persons in English correctly

### **B. Sc. Part III**

#### **Compulsory English Ability Enhancement Compulsory Course (CBCS) ENGLISH FOR COMMUNICATION**

CO79: Grow Communication skills in English in oral and written forms. CO80: Attain needful skills for job interviews.

CO81: Inculcate soft skills needed at job places and in real life.

CO82: Apply knowledge in written interaction for media writing

CO83: Comprehend and enjoy poetry and prose.

CO84: Find and present human values in literary works.

### **B.Com. Part I**

#### **Ability Enhancement Compulsory Course (Compulsory English) (CBCS) English for Business Communication**

CO85: Present use of vocabulary effectively.

CO86: Use English interaction in oral form

CO87: Find and inculcate human values through the text

CO88: Enhance of four basic skills of English language learning (LSRW)

CO89: Applying English from commercial point of view

CO90: Develop writing for business correspondence

### **B.COM. Part II**

#### **ABILITY ENHANCEMENT COMPULSORY COURSE (AECC) (CBCS) ENGLISH FOR BUSINESS COMMUNICATION (Compulsory English)**

CO91: Interacting in English in oral as well as written forms.

CO92: Applying Linguistic skills and competence in personal, academic and professional life.

CO93: Learn and develop soft skills required in job sector. CO94: Increase active participation in the process of learning. CO95: Set an example of humanity and

civilised point of view. CO96: Discuss about banking correspondence in English.

## **Department of History**

### **Program Outcomes**

1. To acquaint students with the past and present of ethos and reality through teaching and research in History.
2. On graduating, the students will be eligible for employment in tourism, Museum, media, and other field. Students also become employable in non-governmental organizations.
3. To prepare students for a range of careers by teaching them courses which will impart them with a set of transferable skills while studying History.
4. To acquaint the students with the various Indian and foreign traditions of History writing and the debates generated about the nature of History as a discipline.
5. To provide students with critical understanding of Indian society, economy, polity and culture through a Historical perspective
6. They will also be able to appear for competitive examinations conducted for public sector jobs. The general humanities education equips them to clear competitive exams.
7. To stimulate intellectual curiosity and research attitude in the students through the study and research of local, regional, national and global History.
8. It introduces the students to major concepts, ideas and events which created the modern world so that they will be able to place Historical events in a larger context.

### **Course Outcomes**

#### **B.A. Part - I, Semester- I**

##### **1. Paper No: I Rise of the Maratha Power (1600-1707)**

After studying the course the student will be able to...

1. Describe the political conditions of the Marathas upto the year 1707
2. Describe the rise and growth of the Maratha Empire
3. Explain the role of Chhatrapati Shivaji Maharaja.
  - 2) Explain the role of rulers like Chhatrapati Sambhaji Maharaj, Chhatrapati Rajaram Maharaj and Maharani Tarabai

#### **B.A. Part - I, Semester- II**

## **2. Paper No. II Polity, Society and Economy under the Marathas (1600-1707)**

After studying the course the student will be able to...

1. Give an account of the Polity, Society and Economy under the Marathas
2. Elucidate the significant developments which took place in Polity, society and Economy
3. Acquaint himself with the contribution of the Society.
4. Explain the thought and work of Chhatrapati Shivaji Maharaja for Polity, society and Economy.

### **B.A.-II, Semester -III**

## **3. Paper III- History of Modern Maharashtra (1900 to 1960)**

After studying the course the student will be able to...

1. Understand the beginnings and growth of nationalist consciousness in Maharashtra
2. Explain the contribution of Maharashtra to the national movement
3. Give an account of various movements of the peasants, workers, women and backward classes
4. Know the background and events which led to the formation of separate state of Maharashtra.

## **4. Paper IV: History Of India (1757-1857)**

After studying this course, the student will...

1. Acquaint himself with significant events leading to establishment of the rule of East India Company
2. Know the colonial policy adopted by the company to consolidate its rule in India
3. Understand the structural changes initiated by colonial rule in Indian economy.
4. Explain the various revolts against rule of the East India Company.

### **IDS PAPER I: Social Reforms In India**

After completion of the course, the student will be able to ...

1. Understand the salient features of prominent socio-religious reform movements
2. Explain the thought and work of Mahatma Phule for radical transformation of Indian society
3. Know the measures taken by Rajashri Shah Maharaj for emancipation of lower classes and women
4. Understand the thoughts of Ambedkar on the annihilation of the caste system and untouchability in India

5. Know how the Indian constitution embodies the values of social justice and equality

#### **B.A.-II, SEMESTER -IV**

#### **5. Paper- V: History of Modern Maharashtra (1960-2000)**

After completion of the course, the student will...

1. Acquaint himself with the contribution of eminent leaders of Maharashtra
2. Know about the economic transformation of Maharashtra
3. Understand the salient features of changes in society
4. Explain the growth of education

#### **6. Paper VI: History of Freedom Struggle (1858-1947)**

After completion of this course, the student will be able to...

1. Understand the events which lead to the growth of nationalism in India
2. Acquaint himself with major events of the freedom struggle under the leadership of Mahatma Gandhi
3. Explain the contribution of Revolutionaries, Left Movement and Indian National Army
4. Know the concept of Communalism and the causes and effects of the partition of India

#### **IDS Paper- II: Social Reforms In Maharashtra**

After studying the course, the student will be able to...

1. Know about the beginnings of social reforms in Maharashtra by the Paramhansa Mandali and Prarthana Samaj.
2. Understand the contribution of women reformers
3. Explain the contribution of Social reformers in the fight for social justice
4. Explain the role played by educational reforms in transformation of society.

#### **B.A. Part -III, Semester –V**

#### **7. Paper No. VII: Early India (from beginning to 4th c. BC)**

After studying the course the student will be able to ...

- 1) Understand the transition of humans in India from Hunters to Farmers
- 2) Explain the transition from Early to Later Vedic period.
- 3) Clarify the causes for the first and second urbanizations
- 4) Give an account of the teachings of Gautama Buddha and Vardhamana Mahavira
- 5) Describe the rise and growth of the Mauryan Empire

6) Explain the salient features of Ashoka's Dhamma

**8. Paper No. VIII: History of Medieval India (1206-1526 AD )**

After studying the course the student will be able to...

- 1) Describe the different types of historical sources available for writing the history of medieval India
- 2) Explain the contributions of medieval rulers like Allaudin Khilji, Muhammad-bin Tuqhlac, Krishnadevraya, and Mahmud Gawan
- 3) Give an account of the administration and economy of the Delhi sultanate and Vijayanagar Empire
- 4) Elucidate the significant developments which took place in religion, society and culture

**9. Paper No. IX: Age of Revolutions**

After studying the course the student will be able to...

- 1) Explain the causes and consequences of the Reformation
- 2) Give an account of the role played by Martin Luther
- 3) Explain the salient features of the Industrial revolution
- 4) Give an account of the American revolution
- 5) Explain the causes, effects and major events of French Revolution
- 6) Explain the role of major leaders of the French Revolution

**10. Paper No. X: Political History of the Marathas**

After studying the course the student will be able to...

- 1) Describe the political conditions of the Marathas upto the year 1740
- 2) Explain the role of Balaji Bajirao.
- 3) Explain the causes and effects of the Battle of Panipat.
- 4) Understand the political condition of the Marathas after 1761.
- 5) Critically analyze the causes for the decline of Maratha power.

### **11. Paper No. XI: History: Its Theory**

After studying the course the student will be able to...

- 1) Understand the definition and scope of the subject of History
- 2) Know the process of acquiring historical data
- 3) Explain the process of presenting and writing history
- 4) Understand the methods of writing history

### **B.A. Part- III, Semester- VI**

#### **12. Paper No. XII: Ancient India (From 4th c. BC to 7th c. AD)**

After studying the course the student will be able to...

- 1) Know the political ,economic and religious developments which took place in early historicIndia
- 2) Explain the role played by Major Satavahana, Kushana, Gupta and Vakataka Kings
- 3) Give an account of the developments in the Post-Gupta period
- 4) Have an informed opinion about the society and culture of Ancient India

#### **13. Paper No. XIII: History of Medieval India ( 1526-1707 AD )**

After studying the course the student will be able to...

- 1) Know about the various sources for writing Medieval Indian history
- 2) Explain the role of rulers like Babar, Akbar, Chandbibi and Ibrahim Adilshah II
- 3) Gain knowledge about the administrative and revenue system
- 4) Describe the condition of Industry and trade
- 5) Explain important developments in religion, society and culture

#### **14. Paper No. XIV: Making of the Modern World (16th to 19th Century)**

After studying the course the student will be able to...

- 1) Know the causes and consequences of the Glorious revolution in England
- 2) Explain the concept of Nationalism and account for its rise and spread.
- 3) Describe the unification of Italy and Germany.

- 4) Give an account of the rise, growth and impact of Imperialism
- 5) Explain the significance of the Partition of Africa
- 6) Know the life and thoughts of important leaders like Metternich, Karl Marx and Abraham Lincoln

**15. Paper No. XV: Polity, Economy and Society under the Marathas**

After studying the course the student will be able to...

- 1) Know the various sources for writing the history of the Marathas
- 2) Explain the significant developments in the polity of the Marathas
- 3) Describe the economic conditions
- 4) Explain the social conditions.

**16. Paper No. XVI: Methods and Applications of History**

After studying the course the student will be able to...

- 1) Understand the nature of archival sources
- 2) Gain conceptual clarity about recent trends in history.
- 3) Know about the application of history in museums.
- 4) Explain the concept and scope of heritage tourism.



## मराठी विभाग

### Program outcome (B.A)

1. विद्यार्थ्यांचा व्यक्तिमत्त्व विकास घडवून विविध परीक्षा आणि स्पर्धा परीक्षांची पूर्वतयारी करून घेणे.
2. निबंधलेखनाच्या माध्यमातून भाषा उपयोजनाची कौशल्ये विकसित करणे,
3. चित्रपट आणि प्रसारमाध्यमे यांच्या लेखन आणि उपयोजनाच्या आकलनाचा अवकाश वाढविणे.
4. विद्यार्थ्यांमध्ये संवादलेखन कौशल्ये विकसित करणे..
5. प्रात्यक्षिकाद्वारे काव्यलेखन कौशल्ये रुजविणे.
6. वेगवेगळ्या भारतीय प्रांतातील व परदेशातील जीवनदर्शन समजून घेणे.
7. आत्मवृत्तपर लेखन कौशल्ये विकसित करणे.
8. कादंबरीलेखनाचे विशेष अभ्यासणे.
9. वृत्तांतलेखन कौशल्ये रुजविणे.
10. जाहिरात लेखनाची कौशल्ये विकसित करणे.
11. मुलाखतलेखन तंत्र विकसित करणे.
12. मराठी भाषेविषयी विद्यार्थ्यांची आवड विकसित करणे.
13. मध्ययुगीन मराठी वाङ्मयाच्या गद्य, पद्य रचनेचे विशेष अभ्यासणे...
14. मध्ययुगीन महाराष्ट्र व महानुभाव पंथ यांचा परिचय करून घेणे.
15. मराठी भाषेबद्दलची विद्यार्थ्यांची आवड विकसित करणे.
16. मध्ययुगीन मराठी गद्य, पद्य रचनेचे विशेष अभ्यासणे.
17. मुद्रित शोधनाची पद्धत अभ्यासणे.
18. ललित गद्यप्रकाराचे स्वरूप अभ्यासणे.
19. व्यक्तिचित्र संकल्पना व स्वरूप समजून घेणे

B.A. II Marathi DSC-C26 Paper – VI

१. कादंबरी वाङ्मयप्रकाराची ओळख करून घेणे.
२. समकालीन कादंबरीतील नव्या अवकाशाचा शोध घेणे व आधुनिकतेमधील अंतर्विरोध समजून घेणे.
३. मानवी मूल्यांविषयी जाणीव निर्माण करणे.

B.A. II Marathi IDS-1 Paper – I

१. मराठीतील चरित्रात्मक वाङ्मयाचा परिचय करून घेणे.
२. चरित्रात्मक वाङ्मयातील चरित्र नायकाच्या व्यक्तित्वाचे पैलू अभ्यासणे.
३. चरित्रात्मक वाङ्मयातून सामाजिक, शैक्षणिक आणि सांस्कृतिक जीवनाची पार्श्वभूमी समजून घेणे.
४. चरित्रात्मक वाङ्मयाधारे राष्ट्रीय एकात्मता आणि मानवी मूल्यांविषयी जाणीव निर्माण करणे.

B.A. II Marathi IDS-2 Paper – II

१. मराठी कथा वाङ्मयाचा उगम, विकास व स्वरूप अभ्यासणे,
२. लोककथेचे रचनाविशेष आणि आजची प्रयोगशील कथा यांचा परस्पर अनुबंध अभ्यासणे.
३. वर्तमानातील प्रश्न लोककथांचे तंत्र व आविष्कार पद्धतीद्वारे कसे मांडले जातात याचा अभ्यास करणे.

B.A. III Marathi DSE-E1 Paper – VII

१. पौर्वात्य, पाश्चात्य व आधुनिक भारतीय साहित्यशास्त्राचे स्वरूप समजून घेणे.
२. ललित व ललितेतर साहित्याचे स्वरूप समजून घेणे.
३. साहित्य प्रयोजनांचे आकलन करून घेणे.
४. साहित्याची निर्मितीप्रक्रिया आणि त्याचे स्वरूप आकलन करून घेणे.
५. भाषेतील अलंकार समजून घेणे.

B.A. III Marathi DSE-E2 Paper – VIII

१. भाषोत्पत्तीचा अभ्यास करणे.
२. भाषाविज्ञानाचा परिचय करून घेणे.
३. भाषाविज्ञान आणि मराठी भाषा यांचा सहसंबंध जाणून घेणे.
४. स्वनविचार, रूपविचार व वाक्यविचारांचा परिचय करून घेणे.

B.A. III Marathi DSE-E3 Paper – IX

१. मध्ययुगीन मराठी वाङ्मयाचा कालिक अभ्यास करणे.
२. मध्ययुगीन मराठी वाङ्मयाचा स्थूल परिचय करून घेणे.
३. मध्ययुगीन मराठी वाङ्मयाचे स्वरूप, वैशिष्ट्ये अभ्यासणे.
४. मध्ययुगीन मराठी वाङ्मयातील महत्त्वाचे ग्रंथकार आणि ग्रंथ यांचा स्थूल परिचय करून घेणे.

B.A. III Marathi DSE-E4 Paper – X

१. सर्जनशील लेखनप्रक्रिया समजून घेणे.
२. वैचारिक लेखनाचे स्वरूप अभ्यासणे.
३. शोधनिबंध व प्रकल्पलेखन कौशल्य समजून घेणे.
४. आंतरजालावरील मराठी लेखनपद्धती अभ्यासणे.

B.A. III Marathi DSE-E5 Paper – XI

1. महानुभाव वाङ्मयाच्या प्रेरणा व स्वरूप समजून घेणे.
2. महानुभावीय ग्रंथकार केसोबास यांचा परिचय करून घेणे.
3. दृष्टांतपाठातील आशयस्वरूप व अभिव्यक्ती विशेष अभ्यासणे.
4. दृष्टांतपाठातील भाषिक वैभवाचा परिचय करून घेणे.

B.A. III Marathi DSE-E126 Paper – XII

१. शब्दशक्तींचे आकलन करून घेणे.
२. साहित्यातील रसाचे स्वरूप व रसप्रक्रिया समजून घेणे.
३. निर्मितीच्या आनंदाची मीमांसा करणे.
४. व्यवहार भाषा, शास्त्रभाषा आणि साहित्यभाषा यांतील भेद समजून घेणे.
५. साहित्यभाषेचे आकलन करून घेणे.
६. भाषेतील छंद व वृत्ते यांचा अभ्यास करणे

B.A. III Marathi DSE-E127 Paper – XIII

१. मराठी भाषेची वर्णव्यवस्था समजून घेणे,
२. ध्वनी व अर्थपरिवर्तनाची कारणे व प्रकार यांची माहिती करून घेणे.
३. प्रमाणभाषेचे स्वरूप व विशेष अभ्यासणे.
४. बोलींचे स्वरूप व विशेष समजून घेणे.

B.A. III Marathi DSE-E128 Paper – XIV

१. मध्ययुगीन मराठी वाङ्मयाचा कालिक अभ्यास करणे.
२. मध्ययुगीन मराठी वाङ्मयाचा स्थूल परिचय करून घेणे.
३. पंडित कवी व त्यांची रचना यांचा परिचय करून घेणे.
४. बखर वाङ्मय आणि शाहिरी वाङ्मय यांचे स्वरूप, विशेष अभ्यासणे.

B.A. III Marathi DSE-E129 Paper – XV

१. प्रसारमाध्यमांतील अर्थार्जनाच्या संधी आणि भाषिक कौशल्ये यांचा परिचय करून घेणे.
२. स्पर्धा परीक्षांमध्ये मराठी भाषा विषयाचे महत्त्व समजून घेणे.
३. उद्योग व सेवा क्षेत्रात मराठी भाषेद्वारे अर्थार्जनप्राप्ती संदर्भात ज्ञान संपादन करणे.

B.A. III Marathi DSE-E130 Paper – XVI

1. मुलखावेगळी माणसं मधील व्यक्तिविशेषांचे आकलन करून घेणे.
2. 'मुलखावेगळी माणसं'मधील शैक्षणिक, सामाजिक, सांस्कृतिक, राजकीय पर्यावरण आणि कौटुंबिक भाव अभ्यासणे
3. मुलखावेगळी माणसं मधील ग्रामीण व उपेक्षितांच्या जीवनाचे आकलन करून घेणे.
4. मुलखावेगळी माणसं'मधील अभिव्यक्ती, निवेदनशैली व भाषाविशेष अभ्यासणे.

# Department of Geography

## PROGRAMME SPECIFIC OUTCOMES AND COURSE OUTCOMES

### A. PROGRAMME SPECIFIC OUTCOMES:

**On Completion of the BA (Geography) Students shall be able to.**

1. Study the different branches of Physical and Human Geography with their interdisciplinary approaches.
2. Study the land forms and processes of their development.
3. Understand the structure and composition of Earth and its Atmosphere.
4. Study the factors affecting on distribution of population, patterns and functions of settlement and agriculture.
5. Understand importance of natural resources and find out the ways of their conservation.
6. Know the relationship of human activities with the resources and economic development of the country at global context.
7. Acquire skills in Cartography, Preparation of thematic Maps, Map reading and interpretation.
8. Make use of M S Excel in representation of statistical data.
9. Know the importance and applications of GIS, GPS and Remote sensing data for geographical study.
10. Able to conduct village survey and organization of study tour for understanding the geographical region.

### B. Course Outcomes

Class	Course	Semester	Outcomes
B.A. I	<b>Physical Geography DEC - 10</b>	I	<ol style="list-style-type: none"><li>1. Know the basic Concepts of Physical Geography</li><li>2. Understand the nature of atmosphere and Learn basics of temperature and Atmospheric pressure</li><li>3. Have basic knowledge of interior of earth and internal forces</li><li>4. Aware about the forces and their effects</li><li>5. Learn processes behind the formation of fluvial cycle and landforms</li><li>6. 6. Develop interest in landforms around and know the landforms seen in nearby areas</li></ol>

B.A. I	<b>Human Geography DSC – B 24</b>	<b>II</b>	<ol style="list-style-type: none"> <li>1. Know the basic Concepts of Human Geography</li> <li>2. Develop interest in human imprints on Earth</li> <li>3. Understand the concepts and theories of population</li> <li>4. Learn about the settlements and their functions</li> <li>5. Know the agriculture and its problems</li> <li>6. Become aware about agricultural problems Class Course Semester Outcomes.</li> <li>7. Understand the concept of Google Earth and Google Map.</li> </ol>
B.A. II	<b>Soil Geography DSE - III</b>	<b>III</b>	<ol style="list-style-type: none"> <li>1. Know the fundamental concepts of soil geography</li> <li>2. Understand the soil is key resource for the development of the country</li> <li>3. Aware about process of soil formation, development and soil properties</li> <li>4. Know classification, characteristics and distribution of soils</li> <li>5. Aware about soil degradation, soil erosion</li> <li>6. Know about conservation of soils and methods of soil management</li> <li>7. Aware about the soil profile and understand the soil sampling and soil analysis</li> </ol>

	<b>Resource Geography DSE - IV</b>	<b>III</b>	<ol style="list-style-type: none"> <li>1. Understand the concept resource geography and classification of resources</li> <li>2. Acquire knowledge about major resources with their distribution, utilization and problems.</li> <li>3. Study sustainable resource development</li> <li>4. Familiarize with the cartographic techniques.</li> </ol>
	<b>Oceanography DSE- V</b>	<b>IV</b>	<ol style="list-style-type: none"> <li>1. Know the oceanography is the fundamental branch of physical geography.</li> <li>2. Understand marine is the key resource for the development of the country</li> <li>3. Know the properties and dynamics of the oceans.</li> <li>4. Able to know and draw oceanic currents in Atlantic, Pacific and Indian ocean</li> <li>5. Understand the Marine Resources and aware about Marine Deposits and Pollution</li> <li>6. Understand theoretical concepts regarding Hypsographic Curve, Wind Rose, Isohalines and Isotherms with</li> </ol>
	<b>Agriculture Geography DSE – VI</b>	<b>IV</b>	<ol style="list-style-type: none"> <li>1. Understand concept and development of Agriculture. Examine the role of agricultural determinants towards the changing cropping pattern.</li> <li>2. Know agricultural systems and land-use theory.</li> <li>3. Learn regionalization and agricultural regionalization and associated problems.</li> <li>4. Understand agricultural problems and sustainable development of agriculture.</li> <li>5. Learn cartographic techniques and graphical representation.</li> </ol>

	<p align="center"><b>Evolution of Geographical Thought Paper No. VII</b></p>	<p align="center"><b>V</b></p>	<ol style="list-style-type: none"> <li>1. Student should be able to understand in-depth about the Evolution of Geographical Thought.</li> <li>2. Students should be able to analyse the recent trends in geography.</li> <li>3. Student should be able to make use of various models of paradigms and debates in the geographical studies.</li> <li>4. Understanding of recent trends in geography.</li> </ol>
	<p align="center"><b>Geography of India Paper No. VII</b></p>	<p align="center"><b>V</b></p>	<ol style="list-style-type: none"> <li>1. Understand the physiographic profile of India</li> <li>2. Aware about the climatic seasons in India</li> <li>3. Know about soils, vegetation, drainage systems in India.</li> <li>4. Learn about the mineral and power resources of India</li> <li>5. Aware about Importance of Agriculture and Industries in Indian Economy.</li> <li>6. Understand the distribution Production and trade of major crops and industries in India</li> </ol>
	<p align="center"><b>Population Geography Paper No. IX</b></p>	<p align="center"><b>V</b></p>	<ol style="list-style-type: none"> <li>1. Understand the concept and fundamentals of population geography along with relevance of demographic data.</li> <li>2. The students would get an understanding of distribution and trends of population growth in the developed and less developed countries, along with population concepts. Understand the process and value of Geographical Research</li> <li>3. Understand the dynamics of population</li> <li>4. Understand of the implications of population composition in different regions of the world.</li> </ol>

B.A. III	<b>Economic Geography of India Paper X</b>	<b>VI</b>	<ol style="list-style-type: none"> <li>1. Study the basics of Economic Geography</li> <li>2. Acquainted with the relationship of human activities with natural resources</li> <li>3. Know about manufacturing and Agricultural Industries and its theories.</li> <li>4. Study the core part of the subject at global level</li> <li>5. Study global level situation and apply this knowledge at local level.</li> <li>6. Understanding of the transport and trade.</li> </ol>
	<b>Urban Geography Paper XI</b>	<b>VI</b>	<ol style="list-style-type: none"> <li>1. Study the basics of Urban Geography</li> <li>2. Know the types of Urban settlements, sites and their situation and functions</li> <li>3. Understand the relationship between human activities and Urban development</li> <li>4. Understand the Structure and Morphology of Urban Centers</li> <li>5. Capable to handling the problematic situation in urban and rural areas</li> <li>6. Become good planners and environmental conservators.</li> </ol>
	<b>Political Geography Paper No. XII</b>	<b>VI</b>	<ol style="list-style-type: none"> <li>1. Understand the distinct dimensions of Political Geography</li> <li>2. Create awareness about the role of geographical factors influencing the political characters of countries and regions</li> <li>3. Learn major concepts, theories and elements of the Political Geography</li> <li>4. Understand the geo- Strategic views for geographical regions</li> <li>5. Aware about resource conflicts and politics of displacement.</li> </ol>



	<p align="center"><b>Map Work and Map Interpretation Paper XIII (Practical Paper I)</b></p>	<p align="center"><b>V</b></p>	<ol style="list-style-type: none"> <li>1. Understand the importance of map making and map interpretation</li> <li>2. Know importance of Map, Map Projection and concept of Scale.</li> <li>3. Become confident to analyze and identify the landforms</li> <li>4. Develop skill in map reading and map interpretation</li> <li>5. Getting knowledge about S. O. I. toposheet and I. M. D. weather maps</li> <li>6. Familiarize with different cartographic techniques and methods to represent physio-socio-economic data.</li> </ol>
	<p align="center"><b>Advance Tools Techniques and Field Work</b></p>	<p align="center"><b>VI</b></p>	<ol style="list-style-type: none"> <li>1. Understand the importance of Field work and Advanced techniques in Geography</li> <li>2. Application of modern tools and techniques in Geography</li> <li>3. Enhance the skill of instrumental survey . Understand use of computer and its application for analysis of geographical data</li> <li>5. Know the basics of Remote Sensing, Arial Photographs, GIS and GPS and its application</li> </ol>

## Department of Economics

### COs, PSOs and POs

#### Programme Outcomes (POs)

B.A. Economics Programme Students will after successfully completing the programme will have

PO 1	Develop the ability to explain core economic terms, concepts, and theories
PO 2	Demonstrate the ability to employ the “economic way of thinking.”
PO 3	Demonstrate awareness of global, historical, and institutional forces
PO 4	Apply economics theories and concepts to contemporary social issues as well as formulation and analysis of policy.
PO 5	Recognize the role of ethical values in economic decisions
PO 6	Demonstrate the ability to collect, process and interpret data, including statistical inference
PO 7	Be able to use critical thinking skills within the discipline of economics about economic matters.
PO 8	Apply both oral and written communication skills within the discipline.

### Programme Outcomes- B.A.

After the completion of three year graduation, students will be able to acquire the Following attributes.

<b>PO 1</b>	<b>Ethics and Human Values:</b> Able to practice ethics in public life and demonstrate adherence to human values,
<b>PO 2</b>	<b>Application-</b> Able to apply techniques, skills and tools in new contexts.
<b>PO 3</b>	<b>Analysis-</b> Able to analyse problems objectively and find solutions.
<b>PO 4</b>	<b>Social Awareness-</b> Able to understand and interact with people belonging to diverse backgrounds (social, cultural, economic, religious and linguistic) And use culture-specific norms.
<b>PO 5</b>	<b>Individual and Team Work-</b> Able to use appropriate individual and group Behaviour in real life situations.
<b>PO 6</b>	<b>Domain Knowledge-</b> Acquire knowledge of fundamentals, principles and Methods.
<b>PO 7</b>	<b>Communication Skills-</b> Effective speaking, active listening, giving and Receiving feedback, empathy and respect for others.
<b>PO 8</b>	<b>Environment and Sustainability-</b> Able to use natural and community resources with a sense of responsibility and engage in environmentally Sustainable practices.

<b>PO 9</b>	<b>Skill Development-</b> Able to use skills acquired during the programme in Real life situations.
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## Programme Specific Outcomes (PSOs)

After completing B. A. Economics students will have

PSO 1	Understanding how different degrees of competition in a market affect pricing and output.
PSO 2	Understanding the efficiency and equity implications of market interference, including Government policy.
PSO 3	Developing the research knowledge in economics and Applying quantitative or logical reasoning/research for problem solving
PSO 4	Developing the skills of data collection, data exploration and data analysis
PSO 5	Understanding Indian economy and economic environment

## Course Outcomes

After successfully completing this course, students will be able to

<b>B A –I Indian Economy.</b>	CO.1	Understanding characteristics, features, structural changes in Indian Economy.
	CO.2	Comprehension of the nature and impact of New Economic Reforms on the Indian Economy
	CO.3	Knowing the problems of unemployment, poverty, rising economic and social inequality and problems of regional imbalance in India.
	CO.4	Evaluating the changing role of agriculture. Industrial and service sector and foreign sector in Indian Economy.
	CO.5	Measuring the problems prospects of cottage and small scale industries, and industrial sicknesses.
	CO.6	Measuring the growth, volume, composition and direction of India's foreign trade and capital inflow since 1991.
<b>B A -II Banks and Financial Institutions .</b>	CO.1	Understanding the meaning, function and role of commercial Banking.
	CO.2	Comprehending the procedure of an account opening, operating and Closing.
	CO.3	Knowing the structure, function and role of RBI in economic Development.
	CO. 4	Judging the progress of financial inclusion.
	CO.5	Evaluating the importance, characteristics and components of the Financial market.
	CO.6	Understanding the role and types of development banks and Non-Banking financial intermediaries.
	CO.7	Realizing the banking reforms and Basel norms-1 and 2.
	CO.8	Identifying recent trends in Indian banking such as E-Banking, MICR clearing, ATMs, Credit Cards and Debit Cards, Travelers Cheques, Gift cheques, Demat Account.
	CO.1	Identifying the basic concepts and theories of Macro Economics

<b>B A -II</b> Macro Economics.	CO.2	Awareness about changing macroeconomics policies and theories.
	CO.3	Understanding various concepts such as; GDP, GNP, NNP, Personal Income, Disposable Income, Per Capita Income, and National Income
	CO.4	Identifying the factors determining gross domestic product, employment, the general level of prices, and interest rates.
	CO.5	Realizing the law of markets, consumption function and investment function.
	CO.6	Judging the role of fiscal policy and monetary policy in a Developing Economy.
	CO.7	Knowing features, phases and theories of trade cycles.
	CO.8	Evaluating types, merits and demerits of taxes.
	CO.9	Comprehending the role of public finance in developing.
	<b>B A -III</b> Micro Economics	CO.1
CO.2		Identifying the nature of revenue and cost of production.
CO.3		Comprehending the demand function and production function
CO.4		Realizing various production theories.
CO.5		Clarifying the meaning of marginal, average, total revenue, and marginal, average and total costs and its implication.
	CO.6	Awareness of different markets structure
	CO.7	Understanding pricing in different markets.
	CO.8	Judging the factor pricing.
<b>B A -III</b> Research Methodology in Economics.	CO.1	Understanding the basic framework of research process
	CO.2	Defining various research designs and techniques.
	CO.3	Identifying various sources of information for literature review and data collection.
	CO.4	Discussing the ethical dimensions of conducting applied research.
	CO.5	Appreciating the components of scholarly writing and evaluate its quality
	CO.6	Knowing various aspects of Research in Economics.
	CO.7	Understanding various data analysis techniques ( Mean, Median, Mode, Range, Standard Deviation Karl Pearson coefficient of correlation).
	CO.8	Ability to interpretation of data and report writing.
<b>B A –III</b> History of Economic Thoughts	CO.1	Acquaintance with the economic thoughts of Classical, Nationalist and Socialist Thinkers
	CO.2	Judging the development of economic thoughts.
	CO.3	Realizing the economic concepts and theories of Neo-Classical and Indian thinkers.
	CO.4	Evaluating the development of Indian economic thoughts.
<b>B A -III</b> Economics of Development	CO.1	Understanding the concept and aspects of economic Development.
	CO.2	Knowing the theories of economic growth and Development.
	CO.3	Measuring the concept and issues of economic planning.
	CO.4	Discussing the need, types and necessary conditions of economic Planning.
	CO.1	Elaborating the importance of the study of International Economics
	CO.2	Finding similarities and dissimilarities in inter-regional and international trade.
	CO.3	Knowing the changes in the import –export policies of India.

<b>BA -III</b> International Economics.	CO. 4	Evaluating various types of exchange rates and its merits and demerits
	CO. 5	Discussing the types and effects of tariffs and quotas.
	CO. 6	Judging the function, merits and demerits of Foreign Capital, and International Corporation (IMF, IBRD, WTO, and SAARC)
	CO. 7	Realizing the volume, composition and direction of Balance of trade and balance of payments.

## **Department of Political Science**

### BA Political Science

#### **PROGRAMME OBJECTIVES (POs):**

1. To encourage the students with the practical knowledge of political, social and environmental issues connecting with the society
2. To encourage human values and social commitment by bringing the issues of justice, dignity of life, liberty, rights, diversity of religion, ethnicity, etc.
3. To provide scope to the students to visit practical field in village areas, different institutions, parliament, secretariat etc
4. To offer courses comprising relevant issues of gender, human values etc. in the curriculum

#### **PROGRAMME SPECIFIC OUTCOMES (PSOs):**

1. To offer various courses emphasizing with the issues relevant to the contemporary world
2. To encourage students to explore and observe the practical world in a pragmatic manner
3. To offer specialized courses such as Introduction to Human Rights, Public Administration, Social Movements in India, etc.
4. To train the students in skill oriented course such as Women and Politics, Politics in Northeast India, Local Government in India, Welfare State: Issues and Challenges, etc.

#### **COURSE OUTCOME (COs)**

##### **Title of the Paper- Introduction to Political Science:- I & II**

The student will be able to

CO - 1 Acquire domain Knowledge

CO-2 Understand importance of Political Science

CO-3 Understand sub disciplines of Political Science

CO-4 Understand Concept of State and Democracy

CO-5 Understand Key Concepts of Political Science

COI- The students will get knowledge about making and philosophy of Indian Constitution

CO2- The students will become aware about Fundamental Rights

CO3- The students will become aware about Directive Principles and Fundamental Duties

CO4- The students will understand about working of Legislature, Executive and Judiciary

COS- The students will understand about working and role of Judiciary

CO1: To make the student understand about political Science, its nature and scope and its relation with other social sciences.

CO2: To acquaint the students with basic idea about how traditional approaches of political Science was introduced and why modern political thinkers criticized the approaches

CO3: To provide awareness about the Rights and duties of one's mother country

CO4: To understand the political institutions such as Legislature, executives, judiciary, political parties and pressure groups etc.

CO5: To study and analyse the running government system and its functions

### B.A.II Sem III

#### Paper III- Political Process in India

An understanding of the political process in India calls for a mode of analysis, which takes into consideration social and economic relations in society, and the manner in which they impact upon and are shaped by the institutional frameworks of politics. This course equips students with the tools of studying the political process in India by looking at the relationship between the components of the political system, the social and economic contexts in which they unfold, and the democratic values that they seek to achieve.

CO1: To gain insights into the interconnections between social and economic relations and the political process in India.

CO2: To understand the challenges arising due to caste, class, gender and religious

## Diversities

CO3: To analyse the changing nature of the Indian state in the light of these diversities.

CO4: To make sense of the specificities of the political processes in India in the light of Changes of the state practices, electoral system, representational forms and electoral behaviour

## Title of the Paper- Local government in India:-V

CO1: To understand the concept, scope and importance of local government

CO2: To acquaint the students with historical background of local government in India

CO3: To impart knowledge about the types of local government in India

CO4: To get the knowledge of constitutional amendments on local government in India

CO5: To probe into the issues and challenges of local government in India

## Title of the Paper- Indian Political Thought:- IV&VI

CO1: To know the thoughts and philosophy of ancient political thinkers.

CO2: Exploring the influence of Brahmanism and Islam on Indian society

CO3: To know the thoughts of leading political thinkers at the time of Indian Renaissance.

CO4: To know the thoughts of political thinkers to Indian Nationalism.

CO5: To know and understand the thoughts of political thinkers of modern India specially the Contributions and sacrifices of M.K. Gandhi and Jawaharlal Nehru in particular.

## Title of the Paper- Public Administration (IDS):-1

CO1: To acquaint the students with the basic concept of administration

CO2: To understand the foundation, philosophy and historical background of Public Administration as a discipline.

CO3: To get the knowledge of various principles of Organization.

CO4: To familiarize the theoretical foundations of administration by various classical social scientists' views

CO5: To acquaint the knowledge on new approaches of Public Administration

## Title of the Paper- Public Administration (IDS):-2

CO1: To get the knowledge on the theoretical foundations of administration by various Contemporary thinker's views.

CO2: To understand the concept of Personnel Administration and its various processes

CO3: To get the knowledge of financial administration and the budgetary process

CO4: To familiarize with the controlling mechanisms of administrative system in India

CO5: To acquaint the knowledge on bureaucracy and its challenges in India

### B.A.III.Sem V

#### Title of the Paper - Political Theory: - VII

CO1: To understand about political theory, its nature and scope and its relation with othersocial sciences to analyse political science as interdisciplinary subject.

CO2: To acquaint the students with basic idea about different trends and approaches of political theory with highlighting the changing nature of political theory and emergence of new school of thought in the discipline.

CO3: To provide guidance to understand the concept of democracy and its application in reality by looking into from different perspective.

CO4: To have idea on concept of power, its different forms and exercises.

CO5: To connect the concept like power, authority and legitimacy to understand the pattern of execution of power, its validity and rationality.

#### Title of the Paper- Public Administration VIII

CO1: Acquiring information about various concepts in Public Administration.

CO2: Getting knowledge about Organization, its Bases, Principles and Units

CO3: Getting acquainted with the budgetary process in India.

CO4: Understanding the interface between citizens and Public Administration; and other agencies in society and Public Administration,

#### Title of the Paper- International Relation:-IX

CO1: To understand the meaning of international relations and its nature and scope by highlighting its differences with international politics.

CO2: To analyse new issues in international relations and its impact on International order..

CO3: To have basic idea about different approaches to the study of international relation



and tries to analyse the present order from the perspective of those approaches.

CO4: To analyse and explain the history of international politics and its current form.

CO5: To have conceptual clarity of basic concepts of international relations, its usages and Relevance.

#### Title of the Paper- Comparative government and politics:-X

CO1: Introduction to different government structures

CO2: Explore political dynamics and political system

CO3: Importance of political parties on decision making and policy formation

CO4: Classification of Political System

CO5: To understand historical context of modern government

#### Title of the Paper- Western political thought:- XI

CO1: Exploring the natural-rational tradition of Greeks

CO2: Foundation of Greek political thought: Plato and Aristotle

CO3: Understanding medieval-Christian tradition

CO4: Knowing the social Contractualists

CO5: Acquainted with the prominent among utilitarianism

#### Semester VI

#### Title of the Paper: Modern Political Concepts XII

CO1: Student will know modern concepts such as Feminism, Multiculturalism, and Environmentalism

CO2: This will enable students to have comprehensive idea of contemporary scenario in political science.

#### Title of the Paper: Politics and Movements in Maharashtra XIII

CO1: Student will know the Political System of Maharashtra.

CO2: They will understand the process of formation of Maharashtra State

CO3: Student will know the movements, pressure groups and political parties in Maharashtra

CO4: This will provide comprehensive idea of contemporary politics of Maharashtra.

#### Title of the Paper -Foreign Policy of India: XIV

CO1: Student will understand, what is Foreign Policy and what are the objectives of Foreign Policy

CO2: This will provide comprehensive idea of foundation of Indian Foreign Policy

CO3: Student will come to know India's relation with super powers and neighboring

countries.

CO4: It will bring attention of the students towards the current national and international political situation and foreign policy

**Title of the Paper: Comparative Government (With special reference to UK & USA) XV**

CO1: To familiarizes students with composition, functions, and law making process of legislative bodies in UK and USA

CO2: To introduce the students with execution process of laws in UK and USA

CO3: To introduce the Judicial System in UK and USA and procedure of adjudication

CO4: Students will understand the role of Pressure Groups in the Politics of UK and USA

**Title of the Paper: Western Political Thought- XVI**

CO1: The students will understand Political views of J. S. Mill, Karl Marx, Gramsci & Hannah Arendt is will get acquainted with various aspects of state and society with western perspective

CO 2: Get information of classical traditions of thinkers and their historical aspects of state and society.

CO3 : Study of the views of modern Western thinkers and emerging aspects of state and society

## **DEPARTMENT OF SOCIOLOGY**

### **Programme Outcomes**

1. To inculcate universal human values among the students
2. To equip the students with Life Skills along with soft skills.
3. To create Social, Cultural, Political, Environmental, Economical and Moral awareness among the students.
4. To introduce the students with various disciplines of Arts and Social Science.
5. To develop leadership qualities among the students.
6. To develop the employment and Entrepreneurship Skills.
7. To develop the responsible citizens of the country.
8. To develop National Integrity among the students.
9. To develop rational and scientific approach among the students.

### **Programme Specific Outcomes**

1. To create ability to understand social life and behavior.
2. To understand and able to criticize of social thoughts of thinkers and social reformers.
3. To enhance proficiency in sociology.
4. To acquaint skills and knowledge for the self-reliance.
5. To develop an ability to analyze and evaluate various social problems.
6. To contribute in the movements of universal peace, social development, and social health.

### **Course Outcome**

#### **Course: B. A. I Semester I and II (Introduction to sociology –I(DSC-B2) & Applied sociology- II(DSC-B-16)**

1. To acquaint the student's basic concepts of Sociology.
2. To understand sociological theories.
3. To understand approaches of applied sociology.
4. To develop knowledge and skills of career opportunities in sociology.

#### **Course: B. A. I Generic Elective – I (Compulsory) Semester I and II (STD – I(CG-1B)& STD- II(CG-2B)**

1. To acquaint the students with various dimensions of the Science Technology and Development.
2. To understand all latest concepts in Science Technology and Development in brief but in adequate manner.
3. To acquaint the students with various challenges, confronting the Science

Technology and Development.

**Course: B. A. Sociology -(CBCS) II DSC – D3 Semester - III, Paper No. III - Social Issues in India**

1. To acquaint the student's Sociological study of Social Issues.
2. To able attention of the students for to need to study 'Socio- Cultural, Economic, and legal issues in India.

**Course: B.A. Sociology -(CBCS) Part – II – DSC – D4 Semester - III, Paper No. IV -Social Movement in India**

1. To understand the variety of ideas and debates about social movements in India.
2. To able critically engages with the multiple socio-political forces and ideologies which shape the terrain of the nation.

**B.A. Part-Sociology (CBCS) – II - DSC – D31 Semester - IV, Paper No. V - Gender and Violence**

1. To understand approaches of violence such as: Gendered violence is routine and spectacular, structural as well as situated.
2. To create ability to understand of the logic of that violence and awareness about peaceful society with reference of India.

**B.A. Sociology -(CBCS) Part – II - DSC – D32 Semester - IV, Paper No.VI - Sociology of Health**

1. To acquaint knowledge within students to the sociology of health, illness and medical practice.
2. To able to understand the significance of socio-cultural dimensions in the construction of illness and medical knowledge.
3. To able to examine theoretical perspectives the dynamics shaping these constructions. Negotiations of health and illness are explored through ethnographies.

**Course: B. A. III SOCIOLOGY-(CBCS) -Semester – V, DSE – E66 SOCIOLOGY –VII WESTERN SOCIOLOGICAL THINKERS**

1. Understanding the grand foundational themes of sociology.
2. Application of theories and concepts from classical sociological theories to develop intellectual openness and curiosity.
3. Appreciation of the classical concepts and theories to develop awareness of the limits of current knowledge.

**B. A. III SOCIOLOGY-(CBCS) Semester – V, DSE – E67 SOCIOLOGY–VIII METHODS OF SOCIAL RESEARCH (Part-I)**

1. Students are introduced to the concept of conducting research, which is inclusive of formulating research designs, methods and analysis of data.
2. The thrust of the course is on empirical reasoning, understanding and analysis of social reality, which is integral to the concepts of quantitative research. Students learn to differentiate between qualitative and quantitative aspects of research in terms of collection and subsequent analysis of data.
3. Through the competing theoretical perspectives and methodologies, students are able to understand that social reality is multi-faceted, heterogeneous and dynamic in

nature.

4. Students are prepared to arrive at a critical understanding of the course. It also equips them with necessary skills for employment in any social research organization.

**B. A. III SOCIOLOGY -(CBCS) Semester – V, DSE – E68**  
**SOCIOLOGY – IX POLITICAL SOCIOLOGY**

1. An ability to comprehend the embeddedness of political and the social in each other.
2. Familiarity with different theoretical and conceptual issues in political sociology and a capacity to use them to grasp political phenomena in a cross-cultural and comparative perspective
3. Be able to understand and appreciate the diversity of ways in which politics operates historically and spatially to generate a more expansive notion of the realm of the political.
4. Be able to understand the relationship between state and society in shaping politics in India both historically and analytically.
5. Be able to generate hypotheses and research questions within the theoretical perspectives and ethnographic contexts in political sociology.

**B. A. III SOCIOLOGY - (CBCS) Semester – V, DSE – E69 -**  
**SOCIOLOGY – X HUMAN RIGHTS**

- 1) Conceptual understanding about the Human Rights
- 2) Identify issues and problems relating to the realization of human rights
- 3) Understand the nature & role of human rights in India
- 4) Contribute to the resolution of human rights issues and problems
- 5) Educate the society about the human rights and duties in order to create responsible citizenry

**B. A. III SOCIOLOGY -(CBCS) Semester – V, DSE – E70**  
**SOCIOLOGY – XI SOCIOLOGY OF RELIGION**

1. Students will be acquainted with representative texts that symbolize the development of knowledge in the field of Sociology of Religion. They will be able to identify different theories, approaches and concepts that make up the study of religion, distinguish between them and also use terms specific to the field in specific context.
2. Students will be able to make a link between texts and paraphrase their arguments and use these to communicate their ideas in research papers, projects and presentations.
3. By encompassing contemporary developments the course enables students to think about linkages between religion and society at various levels.

**B. A. III SOCIOLOGY -(CBCS) Semester – VI, DSE – E191**  
**SOCIOLOGY – XII INDIAN SOCIOLOGICAL THINKERS**

1. Understanding the characteristics and dynamics of the social world, and how postclassical sociologists attempt to understand the social world.
2. Appreciating the relevance and limits of the contemporary theories or theoretical

approaches to make sense of social reality.

3. Understanding the basic methodological approaches of the thinkers, through some original texts and their role in building sociological knowledge.

**B. A. III SOCIOLOGY-(CBCS) Semester – VI, DSE – E192**

**SOCIOLOGY – XIIMETHODS OF SOCIAL RESEARCH (Part-II)**

1. Students are introduced to the concept of conducting research, which is inclusive of formulating research designs, methods and analysis of data.

2. The thrust of the course is on empirical reasoning, understanding and analysis of social reality, which is integral to the concepts of quantitative research. Students learn to differentiate between qualitative and quantitative aspects of research in terms of collection and subsequent analysis of data.

3. Through the competing theoretical perspectives and methodologies, students are able to understand that social reality is multi-faceted, heterogeneous and dynamic in nature.

4. Students are prepared to arrive at a critical understanding of the course. It also equips them with necessary skills for employment in any social research organization.

**B. A. III SOCIOLOGY -(CBCS) Semester – VI, DSE – E193**

**SOCIOLOGY – XIVSOCIAL ANTHROPOLOGY**

1. To provide the conceptual understanding about anthropology

2. To understand the social aspects of tribal's in India.

3. An understating of emerging as well as enduring issues of concern in Indian rural society.

**B. A. III SOCIOLOGY -(CBCS) Semester – VI, DSE – E194**

**SOCIOLOGY – XVRURAL SOCIOLOGY**

1. An empathy for and ability to engage rural communities as living societies and understand grasp they condition as human condition.

2. An appreciation of rural world and familiarity with the trajectory of theoretical conversation on rural issues and their social, political and policy implications.

3. An understating of emerging as well as enduring issues of concern in Indian rural society

## **DEPARTMENT OF COMMERCE**

### **Programme Outcomes, Programme Specific Outcomes and Course Outcomes (POs, PSOs, Cos)**

#### **Program Outcomes (POs)**

After completion B.Com programme, the students will develop ability:

1. To understand the principles and practices of management.
2. To acquire entrepreneurship qualities and skills.
3. To understand basic accounting knowledge as applicable to business.
4. To face changing environment of business in the process of globalization.
5. To understand basic knowledge of quantitative techniques applicable to business.
6. To understand the concepts in Insurance, Banking, Taxation, Banking, Marketing, and e-commerce.

#### **Programme Specific Outcomes (PSOs)**

1. Students can work in various functional areas like Marketing, Finance, Human Resource Management, Agri-business, and Operations Management.
2. Students are able to work in various industries like manufacturing, service, retail, telecommunication, automobile, banking and finance etc.
3. Programme prepares the students to set up business enterprise and manage diversified growth of entrepreneurship.

#### **Course Outcomes (COs)**

##### **B.Com-ICBCS**

DSC-1, DSC-5 Financial Accounting Paper-I & II

1. Familiar about the basic of accounting, accounting concepts and conventions and accounting process.
2. To acquaint with skill of recording transactions related to partnership firm, consignment transactions, and accounting of professionals.
3. To acquaint with skill of recording transactions related to single entry system.
4. To apply skills of accounting for Conversion of partnership firm into a limited company.
5. To make use of knowledge and skill for accounting of branches.
6. To understand the knowledge about computerized accounting.

#### DSC-3, DSC-6 Management Functions & Applications Paper-I & II

1. To get an idea about the basic managerial process and planning works in real life
2. To develop decision making skills to evaluate various alternatives and situations.
3. To acquaint with the knowledge of organizing various resources.
4. To understand the concepts of authority and process of delegation of authority.
5. To understand importance of proper direction and to develop their communication skill.
6. To get an idea about motivation concept and theories, leadership skill.
7. To understand and utilize techniques of management functions.
8. To understand various emerging issues in management like CSR, Green marketing.

#### GEC-AA1, GEC-AA2 Principles of Marketing Paper- I & II

1. Able to access consumer behavior.
2. Understand various market segments and area.



3. Familiar about the element of marketing i.e 4P.
4. Skills of branding, labeling, and advertising.
5. To know about retail marketing.

**GEC-BB1, GEC-BB2 Insurance Paper- I & II**

1. Knowledge about fundamentals of insurance.
2. Know about various insurance products.
3. Familiar about the life insurance terms and conditions.
4. Basic knows about fire, marine, and general insurance products

**B.Com-III CBCS III & IV**

**CC- I & II Corporate Accounting Paper I & II**

1. Know about company accounting for issue of shares and debentures.
2. Compute the value of shares.
3. Preparation of financial statements as per the provisions of Indian Companies Act 2013.
4. Financial and inventory accounting process on Tally ERP.
5. Profit/loss prior to incorporation.
6. Simulate practice of accounting for liquidation of companies

**GEC-I & II Fundamentals of Entrepreneurship Paper I & II**

1. Theoretical knowledge of Entrepreneurship
2. To develop Entrepreneurship qualities and skills.
3. To familiarize students with Steps involved in the formation of Small Enterprises.
4. To impart conceptual knowledge of Service and Agro Entrepreneurship.
5. Awareness about Business Plan and Project Report

**CC-I, II Modern Management Practice – Paper - I & II**

1. Knowledge of modern management with concepts of emotional and social intelligence, lean and talent management.

2. To understand concepts of CRM.
3. Basic knowledge of quality standards.
4. To understand the Japanese and Chinese Management Practices
5. To know the concept of Event and Performance Management

#### CC-C3-I & II Business Regulatory Framework I & II

1. Know about contract act, labour law- PF, ESI, gratuity etc.
2. Basic of GST and sale of goods act.
3. Know about LLP and partnership act 1932.
4. Know about cyber laws, negotiable instrument act, and consumer protection act

#### DSE-A1 & DSE- A2, DSE-A3 & DSE- A4 Advanced Accountancy Paper I, II, III & IV

1. Practice the preparation of financial statements of banks, accounting for farms and hire purchase system, accounting for insurance claim.
2. Accounting process on Tally with GST.
3. To understand the concept and types of audit
4. Know the company audit with CARO, special audit, and preparation of audit report.
5. To understand the manner of computation of total income.
6. To identify the residential status and its implication on tax liability.
7. To understand the basic concepts of income tax and basis of charge.
8. To know the basic concepts about GST.

#### DSE – B1 & B2, DSE – B3 & B4 Industrial Management Paper I, II, III & IV

1. Understanding the concept Industrial Management.
2. Know about the Work Environment.
3. Identification of the Plant Maintenance.
4. Knowledge regards to the Financial Management.

5. Knowledge about the Human Resource Management, Employee Training.
6. Acquaintance with the Productivity, Inventory Management, Logistic Management and Employee Remuneration.
7. Acquaintance with the Industrial Relations.
8. Acquaintance with the Employee Safety, Health and Moral
9. Acquaintance of HR Accounting

## Department of Chemistry

Sr. No.	Programme Specific Outcome
PSO 1	Promote understanding of basic facts & concepts in chemistry while retaining the excitement of chemistry.
PSO 2	Make students capable of studying chemistry in academic & industrial courses.
PSO 3	Expose the students to various emerging new areas of chemistry & apprise them with their prevalent in their future studies & their applications in various spheres of chemical sciences.
PSO 4	Develop problem solving skills in students.
PSO 5	Develop ability & to acquire the knowledge of terms, facts, concepts, processes techniques & principles of subjects.
PSO 6	Expose & develop interest in the field of chemistry.
PSO 7	Develop proper aptitude towards the subjects.
PSO 8	Skills in chemistry practical work, experiments, laboratory materials & proper handling of instruments
PSO 09	Enhancement of scientific attitude & scientific hobbies
PSO 10	Abilities to apply scientific methods, collection of scientific data, problem solving, Research Paper Writing, etc
PSO 11	Appreciation of the subject, contributions of scientists, scientific methods, scientific programs, etc

### Course Outcome

Sr. No.	Class	Paper No.	Title of the Paper	Course Outcome
		DSC-3A-Chemistry paper I	Inorganic Chemistry	1. Acquisition of knowledge Atomic Structure and Periodicity of Elements. 2. Learning and Understanding chemical bonding and molecular structure, Ionic Bonding. 3. Learning and Understanding chemical bonding and molecular structure valencebond theory (VBT). 4. Learning and Understanding chemical bonding and molecular structure molecularorbital theory (MOT).

1	B.Sc. I	DSC-4A- Chemistry paper II	Organic Chemistry	<ol style="list-style-type: none"> <li>1. Understanding fundamentals of organic chemistry, Generation, Structure, Stability and Reactions of Reactive Intermediates such as Carbocations, Carbanions and carbon free radicals.</li> <li>2. Learning and Understanding types of Stereoisomerism, Optical Isomerism, Concept of Chirality, Elements of Symmetry, nomenclature of stereoisomers.</li> <li>3. Understanding Aromaticity of organic compounds and Mechanism of Electrophilic substitution reactions: Nitration, Sulphonation, Halogenation and Friedel craft reaction.</li> <li>4. Learning and Understanding Cycloalkanes, cycloalkenes and alkadienes.</li> </ol>
		DSC 3B: Chemistry Paper- III	Physical Chemistry	<ol style="list-style-type: none"> <li>1. Inculcation of Knowledge of chemical energetics.</li> <li>2. Inculcation of Knowledge of chemical equilibrium.</li> <li>3. Learning and understanding kinetic theory of gases and derivation of the kinetic gas equation.</li> <li>4. Able to understand order of reaction.</li> <li>5. Able to understand theories of reaction rates</li> </ol>
		DSC-4B- Chemistry Paper IV	Analytical Chemistry	<ol style="list-style-type: none"> <li>1. Inculcation of Knowledge of Importance of analysis, Analytical processes, Methods of analysis, Sampling of solids, liquids and</li> </ol>
			<ol style="list-style-type: none"> <li>gases, Errors, accuracy, Significant figures, mean, median, standard deviation.</li> <li>2. Understanding basic Principle of chromatography, Classification of chromatography.</li> <li>3. Understanding theory of titrimetric analysis.</li> <li>4. Inculcation of Knowledge of Water Analysis.</li> <li>5. Understanding necessity and requirements of good fertilizers.</li> </ol>	

2	B. Sc. II	Paper No. DSC-C3 - Chemistry paper No. V	Physical Chemistry	<ol style="list-style-type: none"> <li>1. Learning and understanding conductivity and transport number of the aqueous solutions with</li> <li>2. Knowledge about surface tension, viscosity and refractive index will be gained by the student.</li> <li>3. Learning and understanding surface phenomena at heterogeneous surfaces.</li> <li>4. Learning the various Nuclear phenomena and measurement of nuclear radiations.</li> <li>5. Learning and understanding the knowledge about third order reaction and theories of reaction rates.</li> </ol>
		Paper No. DSC-C4 - Chemistry paper No. VI	Industrial Chemistry	<ol style="list-style-type: none"> <li>1. Learning and Understanding basic concepts and concentration terms. Distinguish between classical and industrial chemistry</li> <li>2. Students can understand Knowledge of some unit operations.</li> <li>3. Student Understanding the process of corrosion.</li> <li>4. Knowledge of Indian paper industry.</li> <li>5. To understand Knowledge about the chemical nature and cleansing action of soap.</li> </ol>
		Paper No. DSC-D3 - Chemistry paper No. VII	Inorganic Chemistry	<ol style="list-style-type: none"> <li>1. Learning and Understanding basic concepts about coordination complexes.</li> <li>2. Knowledge about application of chelates in analytical chemistry.</li> <li>3. Understanding the properties of P – block Elements.</li> <li>4. Student will be capable of understanding</li> </ol>
				<ol style="list-style-type: none"> <li>the properties of 3d series elements.</li> <li>5. Student will learn the basic knowledge about the qualitative analysis of inorganic Compounds.</li> </ol>

		<b>Paper No. DSC-D4 - Chemistry paper No. VIII</b>	<b>Organic Chemistry</b>	<ol style="list-style-type: none"> <li>1. To impart knowledge about the synthesis, reactivity and applications of carboxylic acids.</li> <li>2. Student will be capable of understanding the nomenclature and reactivity of aldehydes and ketones.</li> <li>3. Student will learn the basic knowledge conformational analysis of organic compounds.</li> <li>4. Students can able to understand classification, configuration and structure of carbohydrates.</li> <li>5. Knowledge about classification, preparation and applications of amines and diazonium salts.</li> </ol>
<b>3</b>	<b>B.Sc. III</b>	<b>Paper No. DSE-E5, Chemistry Paper No. -IX</b>	<b>Inorganic Chemistry</b>	<ol style="list-style-type: none"> <li>1. Useful for the study of role of acids and bases in Chemistry.</li> <li>2. The study of non-aqueous solvents is important to learn all chemical properties of solutes and from the research point of view.</li> <li>3. Useful to understand geometry, stability and nature of bonding between metal ion and ligand in complexes.</li> <li>4. The topic deals with the synthesis and the applications of the semiconductors and Superconductors in electrical and electronic devices.</li> <li>5. The structure, method of preparation and the applications of organometallic compound in various fields are explained.</li> <li>6. The classification, types, mechanism and applications of catalyst in industrial fields is explained.</li> </ol>
		<b>DSE-E6 Chemistry Paper X</b>	<b>Organic Chemistry</b>	<ol style="list-style-type: none"> <li>1. Understanding of energy associated with electromagnetic radiation and its use in analytical technique.</li> <li>2. Knowledge of chromophore, auxochrome and calculation of <math>\lambda_{max}</math>.</li> <li>3. Knowledge of vibrational transitions,</li> </ol>
				<ol style="list-style-type: none"> <li>regions of IR spectrum, functional group recognition.</li> <li>4. Understanding of magnetic-non magnetic nuclei, shielding-deshielding, chemical shift, splitting pattern.</li> <li>5. Knowledge of molecular ion, fragmentation pattern and different types of ions produced.</li> <li>6. Student will predict the structure of organic compound with the help of provided spectral data.</li> </ol>

		<b>Paper No. DSE-E7 Chemistry Paper No.XI</b>	Physical Chemistry	<ol style="list-style-type: none"> <li>1. Learning and understanding quantum Chemistry.</li> <li>2. Knowledge about spectroscopy, Electromagnetic spectrum, Energy level diagram, Study of rotational spectra of diatomic molecules</li> <li>3. Learning and understanding photochemical laws, reactions and various photochemical phenomena.</li> <li>4. Learning the various types of solutions, relations vapour pressure, temperature relations.</li> <li>5. Learning and understanding the knowledge of emf measurements, types of electrodes, different types of cells, various applications of emf measurements.</li> </ol>
		<b>Paper No. DSE-E8 Chemistry paper No. XII</b>	Analytical Chemistry	<ol style="list-style-type: none"> <li>1. Learning and understanding the techniques of gravimetric analysis.</li> <li>2. Knowledge of instrumental analysis of alkali and alkaline earth elements.</li> <li>3. Understanding, working and applications of optical methods as an analytical tool.</li> <li>4. Understanding theory and applications of potentiometric titrations.</li> <li>5. Understanding the basics of ion exchange and column adsorption chromatography, Quality control practices in analytical industries / laboratories.</li> </ol>
		<b>DSE-F5, Chemistry– XIII</b>	Inorganic Chemistry	<ol style="list-style-type: none"> <li>1. Understand the thermodynamic and kinetic aspects of metal complexes.</li> <li>2. Understand role of radio isotopes in medicinal, industrial and Archaeology fields</li> <li>3. Learning and understanding the characteristics, properties and separation of lanthanides and Actinides</li> </ol>
				<ol style="list-style-type: none"> <li>4. Understanding techniques involve in ore dressing and extraction of cast iron from its ore.</li> <li>5. Knowledge about role of various metals and non metals in our health</li> </ol>



		<b>Paper No. DSE-F6 Chemistry Paper No. XIV</b>	Organic Chemistry	<ol style="list-style-type: none"> <li>1. Knowledge of reagents used in organic transformations and various reactions used in organic synthesis.</li> <li>2. Knowing basic terms used in retrosynthetic analysis, retrosynthesis of some organic compounds.</li> <li>3. Student will learn addition reaction across <math>&gt;C=C&lt;</math> and <math>-C\equiv C-</math> bond</li> <li>4. Knowledge of terpenoids and alkaloids w.r.t. occurrence, isolation, characteristics and classification.</li> <li>5. Understanding classification of drugs, Qualities of ideal drug. Synthesis and uses of some representative drugs and Drug action of sulphadiazine.</li> </ol>
		<b>Paper No. DSE-F7 Chemistry Paper No. XV</b>	Physical Chemistry	<ol style="list-style-type: none"> <li>1. Learning and understanding of phase rule, learning of One component, Twocomponent and Three component systems phase diagrams with suitable examples.</li> <li>2. Knowledge about basic concept of Thermodynamics, free energy, Gibbs-Helmholtz equation and its applications, problem related with it.</li> <li>3. Learning and understanding Space lattice, lattice sites, Lattice planes, Unit cell.</li> <li>4. Learning of kinetics, Simultaneous reactions such as i)opposing reaction ii)side reaction iii)consecutive reactions: iv) chain reaction v) explosive reaction</li> <li>5. Learning and understanding the knowledge of distribution law, its modifications, applications of distribution laws.</li> </ol>
		<b>.DSE-F8 Chemistry Paper No. XVI</b>	Industrial Chemistry	<ol style="list-style-type: none"> <li>1. Learning and understanding the whole process of manufacture of sugar and byproducts of sugar industry.</li> <li>2. Learning and understanding of physicochemical principles of production of ammonia, sulfuric acid, nitric acid and sodium carbonate along with its manufacturing plant.</li> </ol>
				<ol style="list-style-type: none"> <li>3. Understanding and learning the classification, synthesis and applications of various polymers.</li> <li>4. Understanding the petroleum Industry, fuels and need of use of ecofriendly fuels.</li> <li>5. Understanding and learning of nanotechnology.</li> </ol>

**Department Physics**  
**Programme Specific Outcomes**  
**AIMS AND OBJECTIVES OF B.Sc.**

The Department of Physics recognizes that curriculum, course content and assessment of scholastic achievement play complementary roles in shaping education. The department is of the view that assessment should support and encourage the goals such as basic knowledge of the discipline of Physics including phenomenology, theories and techniques, concepts and general principles. This should also support the ability to ask physical questions and to obtain solutions to physical questions by use of qualitative and quantitative reasoning and by experimental investigation. The important student attributes including appreciation of the physical world and the discipline of Physics, curiosity, creativity and reasoned skepticism and understanding links of Physics to other disciplines and to societal issues should give encouragement. With this in mind, we aim to provide a firm foundation in every aspect of Physics and to explain a broad spectrum of modern trends in physics and to develop experimental, computational and mathematical skills of students. The programme also aims to develop the following abilities:

PSO1: Read, understand and interpret physical information – verbal, mathematical and graphical.

PSO2: Equip students in methodology related to Physics.

PSO3: Impart skills required to gather information from resources and use them.

PSO4: To give need based education in physics of the highest quality at the undergraduate level.

PSO5: Provide an intellectually stimulating environment to develop skills and enthusiasms of students to the best of their potential.

PSO6: Use Information Communication Technology to gather knowledge at will.

PSO7: Perform experiments and interpret the results of observation, including making an assessment of experimental uncertainties.

## **Course Outcomes**

### **B. Sc. I, Semester I**

#### **Physics Paper I: DSC 1 A: Mechanics I**

After completing this course student will be able to

CO1: Understand and recognize scalar and vector physical quantities.

CO2: Understand and able to apply the ordinary differential equations to physical Problems

CO3: Understand the Newton's laws of motion.

CO4: Understand the conservation of momentum and energy and related physical phenomenon.

CO5: Understand the rotational motion, moment of inertia and able to determine the M. I. of various systems in rotational motion.

## **Physics Paper II: DSC 2 A: Mechanics II**

After completing this course student will able to

CO 1: Apply gravitational laws to a physical problem

CO2: recognize simple harmonic motions in nature and solve their equations

CO3: Understand Properties of matter (e.g. elasticity and surface tension) and apply this knowledge to physical problem.

## **B. Sc. I, Semester II**

### **Physics paper III DSC B: Electricity and Magnetism I**

CO1: Prove and apply Gauss, Stokes and Greens theorems

CO2: Understand electrostatic field and potential and determine the same for different physical bodies.

CO3: Capacitor and its types CO4: Energy in electrostatic field.

### **Physics Paper IV DSC 2B: Electricity and Magnetism II**

After completing this course student will CO1:

Solve and build desired A. C. circuits

CO2: Get knowledge of magnetic effect of electric current and different magnetic materials

CO3: Understand how different energies will convert into electrical energy using magnetic field

CO4: Able to understand Maxwell's equations and its applications.

## **B. Sc. II, Semester III**

### **Physics Paper V: DSC – C1 Thermal Physics and Statistical Mechanics - I**

After completing this course student will

CO1: Understand kinetic interpretation of temperature, Andrew's Expt. and different types of thermometers

CO2: Understand kinetic theory of gases and concept of Transport phenomena.

CO3: Understand thermo-dynamical state, thermodynamic equilibrium, various thermodynamic processes and first law of thermodynamics.

CO4: Understand second and third laws of thermodynamics, Carnot's theorem, working of Carnot's engine, Otto engine and diesel engine and concept of entropy.

### **Physics Paper VI: DSC – C2 Waves and Optics - I**

This course will enable Students to:

CO1: Understand SHM and its solution, superposition principle and Lissajous figures and their uses.

CO2: Understand travelling and standing waves on a string, plane waves and spherical waves.

CO3: Understand define transducers and their types, to understand concept of acoustics of buildings, Sabine's experimental work and reverberation time.

CO4: Understand the Piezo-electric effect, detection of Ultrasonic waves and applications of ultrasonic waves.

### **B. Sc. II, Semester VII**

#### **Paper VII: DSC – C1 Thermal Physics and Statistical Mechanics - II**

This course will enable Students to:

CO1: To Learn measuring skills in practical.

CO2: understand the wave particle duality and its quantum mechanics.

CO3: To understand the length of vibrating air columns, Resonance and can measure velocity of sound.

CO4: To determine thermal conductivity, temperature coefficient of resistance, thermo-emf and specific heat.

### **B. Sc. II, Semester IV:**

#### **Paper VII : DSC – C2 Waves and Optics - II**

This course will enable Students to:

CO1: To understand various thermo dynamical functions, Maxwell's Relations, Joule-Thompson effect and Clausius- Claperyon Equation.

CO2: To understand Black body radiation, Planck's law, Rayleigh-Jean's law, Stefan Boltzmann law and Wien's displacement law.

CO3: To understand Phase Space, Macrostate, Microstate, Ensembles, Priori Probability.

CO4: To understand thermodynamic Probability and Maxwell Boltzmann Distribution law.

## **B. Sc. III Semester V PAPER IX: Mathematical & Statistical Physics**

CO 1: Students have understood micro and macro canonical ensembles, phase space, state.

CO 2: Students can easily distinguish between Mathematical & Statistical Physics. CO 3: Improve the mathematical skills to solve to problems in physics.

CO4: Students have understand different types of differential equations & their solutions.

### **PAPER X: Quantum Mechanics**

CO 1: Students understand the idea of wave function & uncertainty relations. CO 2: Students clear the some concepts of physics by quantum mechanics.

CO 3: Students solve problems on barrier potential well, one and three dimensional potential well

CO 4: To understand the Schrodinger's equation for hydrogen atom.

### **PAPER XI: Classical Mechanics**

CO 1: Students are able to understand the concept of force, constraints, Newton's laws of motions.

CO 2: Formulation of Langrangian equation of motion and solution of problems. CO 3:

Understand the difference between Classical & Quantum Mechanics.

CO 4: Students are able to understand Euler's Theorem and its equation of motion.

### **PAPER XII: Atomic, Molecular Spectra & Astronomy And Astrophysics**

CO 1: Develop a basic understanding of physics of atoms and molecules: definitions, units, laws and rules.

CO 2: Identify atomic effect such as Zeeman effect, Paschen-Back effect and Raman effect.

CO 3: Understanding of basic concepts of Astronomy & Astrophysics

CO 4: Analyze the spectra of diatomic molecules such as electronic, rotational, Vibration spectra.

## **B. SC. III SEM VIPAPER XIII: Nuclear And Particle Physics**

CO 1: Students are able to understand the size of nucleus and all its properties. CO 2:

Students know various method of accelerating various types of particles. CO 3:

Understanding the construction & working of Nuclear Detectors.

CO 4: Students are able to understand the different Nuclear Energy Levels.

### **PAPER XV: Electrodynamics & Electromagnetic Waves**

CO 1: Students know the basic concepts about Electrodynamics & Electromagnetic waves.

CO 2: Students are able to understand concept of Poission's & Laplace's equations and its Solutions.

CO 3: Understanding the various laws like Faraday's Law, Lenz's Law and BiotSavarot's Law.

CO 4: Students learn the basic Maxwell's equation and its physical significance.

### **Paper XIV: Energy studies and Material**

**Science** After completing this course student

will able to CO1: understand basics of

renewable energy sources

CO2: Understand Physics and mathematics of wind turbine generator.

CO3: Understand conversion of solar energy into electric energy, photovoltaic cell, solar PV system and solar potentials.

CO4: understand different types of disorder in the crystalline solids and it's important.

CO5: gain basic knowledge of superconductivity.

### **Paper XVI: Solid State Physics**

After completing this course student will able to

CO1: develop a clear concept of the crystal classes and symmetries

CO2: understand the relationship between the real and reciprocal space

CO3: calculate the Braggs conditions for X-ray diffraction in crystals

CO4: create understanding of electronic and vibrational properties of solid statesystems

CO5: Understand Band theory of solids and use in different physical phenomenon. CO6: Understand construction, working and applications of IC

**Padmabhushan Dr Vasant Rao Dada Patil Mahavidyalaya, Tasgaon**  
**Department of Botany**  
**Programme Specific Outcome and Course Outcome**  
**on CBCS syllabus of Botany**

**Programme Specific Outcome**

<b>Sr. No.</b>	<b>Programme Specific Outcome</b>
PSO 1	Acquisition of knowledge of molecular biology, biotechnology and bioinformatics
PSO 2	Acquiring the basic procedure in the field of microbiology and plant pathology.
PSO 3	Awareness of natural resources and environment
PSO 4	Aptitude for scientific work & ability to pursue studies far beyond graduation
PSO 5	Life science as a career, which is the need now-a-day
PSO 6	Applications of scientific principles for organization of scientific exhibitions and competitions
PSO 7	Development of presentation skills and confidence in students
PSO 8	Skills based practicals and experiments & development of skill of handling of instruments and practical material
PSO 9	Enhancement the interests in the subject
PSO 10	Enhancement of scientific attitude, temper & hobbies
PSO 11	Abilities to apply scientific methods, collection of scientific data, problem solving methodology, Research Paper & project writing, etc
PSO 12	Contribution in scientific method & scientific programs

## Course Outcome

Sr. No.	Class	Theory Paper No.	Title of the Paper	Course Outcome
1	<b>B. Sc. I</b>	DSC 13 A. I	Biodiversity of Microbes, Algae and Fungi	CO1. Aptitude for identification of microbes, algae & fungi CO2. Acquisition of knowledge of ultra structure & economic importance of above group
2		DSC 14 A. II	Biodiversity Of Archegoniate-Bryophytes, Pteridophytes and Gymnosperms.	CO1. Aptitude for identification of Archegoniates CO2. Acquisition of knowledge of ultra structure & economic importance of above group
3		DSC 13 B. III	Plant Ecology	CO1. Acquisition of knowledge of evolution radiations CO2. Acquisition of knowledge of succession of plant community and Ecosystem
4		DSC 14 B. IV	Plant Taxonomy	CO1. Acquisition of knowledge of Plant nomenclature by ICBN. Ex situ conservation of plants via Botanical Gardens CO2. To follow the accepted system of classification of Angiosperm
		<b>Practical</b>		Acquisition of practical knowledge increases skills and working ability of students to perform experiments on plants.
5	<b>B. Sc. II</b>	DSC 13 C. V	Embryology of Angiosperms	CO1. Acquisition of knowledge of pollination biology and plant insect relationship CO2. Aware about embryology of Angiosperm
6		DSC 14 C. VI	Plant Physiology	CO1. To know the plant water relationship and role of minerals as a nutrition in plants CO1. Acquisition of knowledge of carbon reduction pathways and significance of photosynthesis CO1. Acquiring knowledge of plant growth regulators and their practical application



7		DSC 13 D. VII	Plant Anatomy	CO1. Acquiring basic knowledge of tissue system in higher plants CO2. Acquiring the knowledge of different tissues and their role in higher plants. CO3. Acquiring the knowledge of adaptive radiation in tissue system
8		DSC 14 D. VIII	Plant Metabolism	CO1. Acquiring the through knowledge of enzymes. CO2. Acquiring the knowledge of mechanism of enzyme action, structure and properties of enzymes. CO3. Role of Nitrogen in plant metabolism CO4. Role of respiration CO5. Acquiring the knowledge of breaking seed dormancy
		<b>Practical</b>		Acquisition of practical knowledge increases skills and working ability of students to perform experiments on plants.
9	<b>B. Sc. III</b>	DSC- E 25. IX	Genetics and Plant Breeding	CO1. Acquiring the knowledge of genetics and methods of breeding techniques in crop plants
10		DSC- E 26 X	Microbiology, Plant pathology and Mushroom Culture Technology	CO1. Acquiring the basic procedure in the field of microbiology and plant pathology. CO2. Acquiring technology of mushroom cultivation
11		DSC-E 27 XI	Cytology and Research Techniques in Biology	CO1. Acquiring knowledge of cell biology CO2. Ability to handle various instruments in biological research such as SEM, Spectrometer, micrometer
12		DSC- E 28 XII	Horticulture and Gardening	CO1. To develop the skills in horticulture including nursery, landscaping, gardening, floriculture CO2. Students will be able to demonstrate their knowledge, skills and attributes in horticultural profession.
13		DSC- F25 XIII	Plant Biochemistry and molecular Biology	CO1. Students are acquainted with basic as well as recent knowledge in the field of molecular biology
14		DSC- F 26 XIV	Bioinformatics, Biostatics and Economic Botany	CO1. Acquisition of knowledge of bioinformatics, biostatics and economic botany CO2. Students are aware about spices, beverages and fibers, cereals, legumes and

				oils
15	DSC- F 27 XV	Plant Biotechnology and Paleobotany		CO1. Acquisition of knowledge of plant biotechnology, protoplast culture and recombinant DNA technology (research methodology) CO2. Acquainted the scope of Paleobotany in the present scenario and understand the fossil genera.
16	DSC- F 28 XVI	Bio fertilizers and Herbal Drug Technology		CO1. Acquisition of basic knowledge of biofertilizers, herbal drug technology CO2. Student become familiar with organic manures, herbal medicines, herbal cosmetology and pharmacognocny
	<b>Practical</b>			Acquisition of practical knowledge increases skills and working ability of students to perform experiments on plants.

**Padmabhushan Dr Vasantao dada Patil Mahavidyalaya,  
Tasgaon**

**Department of Zoology**

**Programme Specific Outcome**

<b>Sr. No.</b>	<b>Programme Specific Outcome</b>
PSO 1	Acquisition of knowledge of animal science to the pupils
PSO 2	Acquisition of the knowledge of nutrition, agriculture & live stock in their daily life
PSO 3	Awareness of natural resources and environment
PSO 4	Aptitude for scientific work & ability to pursue studies far beyond graduation
PSO 5	Life science as a career, which is the need now-a-day
PSO 6	Applications of scientific principles for organization of scientific exhibitions and competitions
PSO 7	Presentation skills and confidence in students
PSO 8	Skills in practical work, experiments, laboratory materials & handling of instruments
PSO 9	Interests in the subject
PSO 10	Enhancement of scientific attitude & scientific hobbies
PSO 11	Abilities to apply scientific methods, collection of scientific data, problem solving, Research Paper Writing, etc
PSO 12	Appreciation of the subject, contributions of scientists, scientific methods, scientific programs, etc

## Course Outcome

Sr. No.	Class	Paper No.	Title of the Paper	Course Outcome
1	B. Sc. I	I	DSC 15A Animal Diversity I	<ol style="list-style-type: none"> <li>1. Aptitude for identification of Animals as per Scientific Classification.</li> <li>2. Acquisition of knowledge of anatomy and histology of different animals from various groups of Kingdom Animalia</li> </ol>
2		II	DSC 16A Animal Physiology	<ol style="list-style-type: none"> <li>1. Acquisition of knowledge of basic physiology and its relation to daily life.</li> <li>2. Aptitude for identification of alteration in physiological processes by knowing symptoms of various diseases.</li> </ol>
3		III	DSC 15B Cell Biology and Evolutionary Biology	<ol style="list-style-type: none"> <li>1. Inculcation of Knowledge of Cell as well as structure and function of its organelles.</li> <li>2. Understanding various evolutionary theories and its relevance with present evidences.</li> </ol>
4		IV	DSC 16B Genetics	<ol style="list-style-type: none"> <li>1. Inculcation of Knowledge of Genetics to solve criminal cases like pedigree analysis.</li> </ol>
5	B. Sc. II	V	DSC 15C Animal Diversity II	<ol style="list-style-type: none"> <li>1. Aptitude for identification of Animals as per Scientific Classification.</li> <li>2. Acquisition of knowledge of anatomy and histology of different animals from various groups of Kingdom Animalia</li> </ol>
6		VI	DSC 16C Biochemistry	<ol style="list-style-type: none"> <li>1. Acquisition of knowledge of Biomolecules and their chemical processes.</li> </ol>
7		VII	DSC 15D Reproductive Biology	<ol style="list-style-type: none"> <li>1. Acquisition of knowledge of anatomy and histology of reproductive organs in human being.</li> <li>2. Acquisition of knowledge of process of reproduction and its hormonal control in human being.</li> <li>3. Inculcation of Knowledge of assistive reproductive technology for human being.</li> </ol>
8		VIII	DSC 16D Applied Zoology I	<ol style="list-style-type: none"> <li>1. Aptitude for identification of some pathogenic diseases and their control measures.</li> <li>2. Acquisition of knowledge of host parasite</li> </ol>

				relationship and its use in human welfare 3. Aptitude for application of modern technologies in poultry management and its use for human welfare.
9	B. Sc. III	IX	DSE-E29 (Comparative anatomy of vertebrates)	1. Acquisition of knowledge of vertebrate anatomy to compare and decide evolutionary relationship.
10		X	DSE-E30 (Molecular Cell Biology and Animal Biotechnology)	1. Aptitude for various processes of Nucleic acids and their role in cellular mechanism. 2. Acquisition of knowledge of molecular modeling and their use to improve quality of human life.
11		XI	DSE-E31 (Biotechniques and Biostatistics)	1. Aptitude for use of various scientific instruments for molecular modeling. 2. Acquisition of knowledge of Biostatistics for research.
12		XII	DSE-E32 (Aquatic Biology)	1. Acquisition of knowledge of aquatic environment for protection and conservation. 2. Inculcate the knowledge of hormones and hormone related diseases.
13		XIII	DSE-F29 (Developmental Biology of Vertebrates)	1. Acquisition of knowledge of developmental patterns of different economical and research important animals
14		XIV	DSE-F30 (Immunology)	1. Acquisition of knowledge of immune system to improve health status.
15		XV	DSE-F31 (Applied Zoology - II)	1. Social and Economical growth of individual by applying knowledge of Applied Zoology.
16		XVI	DSE-F32 (Insect Vectors and Histology)	1. Aptitude for identification of Insects as vectors and to know their life cycle for control of diseases. 2. Knowledge of internal organs to know the diseased/abnormal/infected/altered conditions.

**Department of Mathematics**  
**Programme Specific Outcomes (OSP)**

<b>Name of Subject</b>	<b>Class</b>	<b>Outcome</b>
Mathematics	First Year	<ul style="list-style-type: none"> <li>• Students will acquire basic domain knowledge of different subjects such as Differential calculus, Calculus, Differential Equations</li> <li>• Students will be able to apply the concepts in solving the problems such as extreme values, electric circuit problems, and orthogonal trajectories.</li> <li>• Students will be able to identify and solve ordinary and partial differential equations.</li> </ul>
Mathematics	Second Year	<ul style="list-style-type: none"> <li>• Students will be to understand the concepts of Real Analysis and Algebra.</li> <li>• Student is equipped with mathematical analysis ability, problem solving skills, creative talent necessary for various kinds of employment.</li> <li>• Students will be able to acquire basic Practical skills and exposure to computer programming through practical courses like SCILAB.</li> </ul>
Mathematics	Third Year	<ul style="list-style-type: none"> <li>• Students will possess subject knowledge required for higher studies, professional and applied courses like M. Sc., Computer studies, Management Studies.</li> <li>• Introduction to various courses like group theory, ring theory, field theory, metric spaces, operation research.</li> <li>• Students will be able to acquire programming skills through C++ programming.</li> <li>• Students will become employable; they will be eligible for career opportunities in Industry, academia.</li> </ul>

### Course Poutcomes (OP):

Faculty: B. Sc.

Name of the Department / Subject: Mathematics

Year: I (CBCS)

Paper Code (As per the syllabus of Shivaji University)	Name of the Paper	Outcome
DSC – 5A	Differential Calculus	<ul style="list-style-type: none"><li>• Student will be able to apply De-Moivre's Theorem and properties of hyperbolic functions.</li><li>• Student will be able to apply notion of successive derivatives and partial derivatives which arise in all applied sciences</li><li>• Student will be able to solve extreme value problems using Lagrange's method</li></ul>
DSC – 6A	Calculus	<ul style="list-style-type: none"><li>• Students will be acquainted with some basic concepts Calculus like Mean value theorems, limit and continuity of functions.</li><li>• Students will learn to use of L – Hospital's rule.</li><li>• Students will understand and learn the concept of differentiation of function of single variable.</li></ul>
DSC – 5B	Differential Equations	<ul style="list-style-type: none"><li>• Students will understand various types of ordinary differential equations of first order and first degree and methods to solve them.</li><li>• Students will learn various types and methods to solve linear differential equations with constant coefficients.</li><li>• Students will understand Cauchy – Euler differential equation, Legendre's linear differential equation and methods to solve them.</li></ul>

DSC – 6B	Higher Order differential Equations and Partial differential Equations	<ul style="list-style-type: none"> <li>• Students will learn methods to solve second order differential equations, ordinary simultaneous differential equations and Total differential equations.</li> <li>• Students will understand difference between ordinary and partial differential equations.</li> <li>• Students will learn various types and methods to solve partial differential equation.</li> <li>• Students will learn Lagrange’s method, Charpit’s method.</li> </ul>
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**Course Putcomes (OP):**

**Faculty: B. Sc.**

**Name of the Department / Subject: Mathematics**

**Year: II (CBCS)**

<b>Paper Code (As per the syllabus of Shivaji University)</b>	<b>Name of the Paper</b>	<b>Outcome</b>
DSC – 5C	Real Analysis - I	<ul style="list-style-type: none"> <li>• Students will be able to understand types of functions and how to identify them.</li> <li>• Students will be able to use mathematical induction to prove various properties.</li> <li>• Students will be able to understand the basic ideas of Real Analysis.</li> <li>• Students will be able to prove and apply order properties of real numbers, completeness property and the Archimedean property.</li> </ul>
DSC – 6C	Algebra - I	<ul style="list-style-type: none"> <li>• Students will understand different types and properties of matrices.</li> <li>• Students will be able to solve homogeneous and non-homogeneous system of linear equations.</li> <li>• Students will be able to find Eigen values and Eigen vectors of a matrix.</li> <li>• Students will learn to classify the various types of groups, subgroups and their</li> </ul>



		properties.
DSC – 5D	Real Analysis - II	<ul style="list-style-type: none"> <li>• Students will understand sequence and its properties pertaining to convergence.</li> <li>• Students will understand The Bolzano-Weierstrass Theorem, Cauchy Convergence Criterion.</li> <li>• Students will understand convergence of series and able to solve the related problems</li> <li>• Students will be able to apply different tests of convergence of series.</li> </ul>
DSC – 6D	Algebra - II	<ul style="list-style-type: none"> <li>• Students will understand Lagrange's theorem and various properties of subgroups.</li> <li>• Students will learn modular arithmetic and be able to apply Fermat's and Euler's theorem</li> <li>• Students will understand properties of normal subgroups, factor group.</li> <li>• Students will understand homomorphism and isomorphism in groups and rings.</li> <li>• Students will be able to derive basic properties of rings and subrings.</li> </ul>

### Course Putcomes (OP):

Faculty: B. Sc.

Name of the Department / Subject: Mathematics

Year: III (SEM V)

Paper Code (As per the syllabus of Shivaji University)	Name of the Paper	Outcome
Paper IX	Real Analysis	Students will <ul style="list-style-type: none"><li>• understand the convergence and divergence of sequence and series of real numbers.</li><li>• understand the integration of bounded function on a closed and bounded interval.</li><li>• understand some families of Riemann integrable functions and properties of integration.</li><li>• be able to determine integrability of a function.</li><li>• understand extension of Riemann integral to the improper integrals.</li></ul>
Paper X	Modern Algebra	Students will be able to <ul style="list-style-type: none"><li>• understand basic concepts of group theory and its different examples.</li><li>• identify whether the given set with the compositions form Ring, Integral domain or field.</li><li>• understand the difference between the concepts Group and Ring.</li><li>• apply fundamental theorem, Isomorphism theorems of groups and Rings.</li></ul>
Paper XI	Partial Differential Equations	Students will be able to <ul style="list-style-type: none"><li>• form and solve linear partial differential equations.</li><li>• solve nonlinear partial differential equation.</li><li>• understand and solve linear homogeneous partial differential equation with</li></ul>

		constant coefficients.
Paper XII	Numerical Methods I	<p>Students will be able to</p> <ul style="list-style-type: none"> <li>• find solution of nonlinear equations using different methods and compare the accuracy.</li> <li>• find solution linear equations using iterative and non-iterative numerical methods.</li> <li>• determine numerically Eigen values and Eigen vectors of a given matrix.</li> </ul>

**(SEM VI)**

<b>Paper Code (As per the syllabus of Shivaji University)</b>	<b>Name of the Paper</b>	<b>Outcome</b>
Paper XIII	Metric Spaces	<p>Students will be able to</p> <ul style="list-style-type: none"> <li>• understand the generalization of distance to metric notion with examples.</li> <li>• appreciate the process of abstraction of limits and continuity to metric spaces.</li> <li>• understand the interconnection within metric concept, open sets, closed sets and continuity.</li> <li>• understand the properties of connected sets, compact sets, complete sets and apply them to explore properties of continuous functions on compact sets and uniform continuity.</li> </ul>

Paper XIV	Linear Algebra	<p>Students will be able to</p> <ul style="list-style-type: none"> <li>• understand notion of vector space, subspace, basis.</li> <li>• understand concept of linear transformation and its application to real life situation.</li> <li>• work out algebra of linear transformations.</li> <li>• appreciate connection between linear transformation and matrices.</li> </ul>
Paper XV	Complex Analysis	<p>Students will be able to</p> <ul style="list-style-type: none"> <li>• understand basic concepts of functions of complex variable and analytic functions.</li> <li>• understand concept of complex integration and basic results thereof.</li> <li>• understand concept of sequence and series of complex variable.</li> <li>• apply concept of residues to evaluate certain real integrals.</li> </ul>
Paper XVI	Numerical Methods II	<p>Students will be able to</p> <ul style="list-style-type: none"> <li>• find solution of interpolation problem with equal interval and unequal interval.</li> <li>• find solution of a definite integration using different numerical methods for it.</li> <li>• find solution of ordinary differential equations using different numerical methods for it.</li> </ul>

# Department of Statistics

## Course Outcomes:

At the end of the course, students will be able to

Class (Semester)	Course Code	Course Title	Course Outcome (C.O.)
B. Sc. I (I)	DSC – 7A	Descriptive Statistics – I	<p><b>CO 1:</b> Meaning and scope of Statistics, various statistical organizations in India.</p> <p><b>CO 2:</b> Understanding of statistical population, sample &amp; various methods of Sampling.</p> <p><b>CO 3:</b> Data and types of data, various data presenting methods, Data collection and its representation by tables, diagrams and graphs.</p> <p><b>CO 4:</b> Describe and interpret various summary measures of central tendencies. □</p> <p><b>CO 5:</b> Categorize the measures of dispersion.</p> <p><b>CO 6:</b> Apply moments to estimate the measures of skewness and kurtosis. □</p> <p><b>CO 7:</b> Concept of Attributes.</p> <p><b>CO 8:</b> Concept of consistency, independence and association between two attributes.</p>
	DSC – 8A	Elementary Probability Theory	<p><b>CO 9:</b> Distinguish between random and non-random experiments. □</p> <p><b>CO 10:</b> Summarize various types of events. □</p> <p><b>CO 11:</b> Acquire knowledge of concepts of probability.</p> <p><b>CO 12:</b> Understand concept of conditional probability.</p> <p><b>CO 13:</b> Understand concept of independence of events.</p> <p><b>CO 14:</b> Demonstrate the concept of Bayes' Theorem.</p>

B. Sc. I (II)	DSC – 7B	Descriptive Statistics – II	<p><b>CO 15:</b> Understanding the concept of bivariate data.</p> <p><b>CO 16:</b> Measure correlation between two variables by method of Scatter diagram, Karl Pearson’s coefficient of correlation &amp; Spearman’s rank correlation coefficient and interpretation of its values.</p> <p><b>CO 17:</b> Explain concept of regression. □</p> <p><b>CO 18:</b> Establish linear regression (if exists) between dependent and independent variables and estimate value of dependent variable for given value of independent variable.</p> <p><b>CO 19:</b> Classify various index numbers and its tests.</p> <p><b>CO 20:</b> Understand the concept of rise or fall in prices or consumption or values of commodities in the current year with respect to base year &amp; interpret it.</p>
	DSC – 8B	Discrete Probability Distributions	<p><b>CO 21:</b> Understand concept of univariate random variable and its probability distributions.</p> <p><b>CO 22:</b> Acquire knowledge of mathematical expectation of univariate random variable.</p> <p><b>CO 23:</b> One point distribution, Two point distribution, Bernoulli distribution.</p> <p><b>CO 24:</b> Apply Discrete Uniform distribution, Binomial distribution, Hypergeometric distribution in computation of probabilities.</p> <p><b>CO 25:</b> Concept of Bivariate discrete distributions.</p> <p><b>CO 26:</b> Mathematical expectation of bivariate discrete random variable.</p>
B. Sc. I (I & II)	-	Practical Paper-I	<p><b>CO 27:</b> Represent statistical data diagrammatically and graphically.</p> <p><b>CO 28:</b> Compute various measures of central tendency, dispersion, moments, skewness and kurtosis.</p> <p><b>CO 29:</b> Compute correlation coefficient, regression coefficients.</p> <p><b>CO 30:</b> Understand consistency, association and independence of attributes.</p>

			<p><b>CO 31:</b> Interpret summary Statistics of computer output.</p> <p><b>CO 32:</b> Know applications of some standard discrete probability distributions.</p> <p><b>CO 33:</b> Compute the index numbers.</p> <p><b>CO 34:</b> Compute marginal and conditional distribution, computation of probabilities of events, expectation, conditional expectation, variance, conditional variance, covariance &amp; correlation coefficient of bivariate discrete distribution.</p> <p><b>CO 35:</b> Draw diagrams and graphs, Compute A.M., G.M., H.M., Variance, C.V. &amp; M.D by using MS-EXCEL.</p> <p><b>CO 36:</b> Compute Moments, Correlation and Regression for ungrouped data by using MS-EXCEL.</p>
B. Sc. II ( III )	DSC – 7C	Probability Distributions –I	<p><b>CO 37:</b> Understand concept of discrete and continuous probability distributions with real life situations.</p> <p><b>CO 38:</b> Distinguish between discrete and continuous distributions.</p> <p><b>CO 39:</b> Find the various measures of random variable and probabilities using its probability distribution.</p> <p><b>CO 40:</b> Know the relations among the different distributions.</p> <p><b>CO 41:</b> Understand the concept of transformation of univariate and bivariate continuous random variable.</p>
	DSC – 8C	Statistical Methods-I	<p><b>CO 42:</b> Understand the concept of Multiple Linear Regression.</p> <p><b>CO 43:</b> Understand the concept of Multiple Correlation and Partial Correlation between two variables, its computation and interpretation.</p> <p><b>CO 44:</b> Know the concept of sampling theory.</p> <p><b>CO 45:</b> Understand the need of vital statistics and concept of mortality, fertility &amp; reproduction rate, computation and interpretation.</p>

B. Sc. II ( IV)	DSC – 7D	Probability Distributions -II	<p><b>CO 46:</b> Apply some standard continuous probability distributions in real life situations.</p> <p><b>CO 47:</b> Distinguish between various continuous distributions.</p> <p><b>CO 48:</b> Find the various measures of continuous random variable and probabilities using its probability distribution.</p> <p><b>CO 49:</b> Understand the relations among the different distributions.</p> <p><b>CO 50:</b> Apply sampling distributions in real life situations for testing independence of attributes, goodness of fit test for given distribution, equality of means and variances of two populations.</p>
	DSC – 8D	Statistical Methods-II	<p><b>CO 51:</b> Know the concept and use of time series also its components.</p> <p><b>CO 52:</b> Understand the meaning, purpose and use of Statistical Quality Control.</p> <p><b>CO 53:</b> Understand construction and working of control charts for variables and attributes.</p> <p><b>CO 54:</b> Apply the small sample tests in various situations.</p> <p><b>CO 55:</b> Apply the large sample tests in various situations.</p>
B. Sc. II ( III & IV)	-	Practical Paper-II	<p><b>CO 56:</b> Compute probabilities of standard probability distributions.</p> <p><b>CO 57:</b> Compute the expected frequency and test the goodness of fit.</p> <p><b>CO 58:</b> Understand how to obtain random samples from standard probability distributions.</p> <p><b>CO 59:</b> Test the goodness of fit of some standard discrete &amp; continuous probability distributions by using MS-EXCEL.</p>
	-	Practical Paper-III	<p><b>CO 60:</b> Understand the applications of Poisson, Geometric, Negative Binomial, Exponential &amp; Normal distribution.</p>



			<p><b>CO 61:</b> Fit plane of Multiple linear regression and compute Multiple and Partial correlation coefficients.</p> <p><b>CO 62:</b> Draw random samples by simple random sampling method.</p> <p><b>CO 63:</b> Compute the various fertility rates, mortality rates and growth rates.</p> <p><b>CO 64:</b> Compute trend by moving average &amp; least square methods, seasonal indices by simple average method.</p> <p><b>CO 65:</b> Construct various control charts.</p> <p><b>CO 66:</b> Apply large sample tests for means, proportions &amp; population correlation coefficients.</p> <p><b>CO 67:</b> Apply tests based on Chi square distribution, t distribution &amp; F distribution.</p> <p><b>CO 68:</b> Understand how to sketch of the discrete &amp; continuous distributions for various parameters using MS-EXCEL.</p>
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## **B.C.A.**

### **PO'S & CO's Program Outcomes**

**After completion of this program students should be able to --**

PO1: Apply knowledge of ICT in solving business problems. PO2: Learn various programming languages and custom software.

PO3: Design component, or processes to meet the needs within realistic constraints. PO4: Identify, formulate, and solve problems using computational temperaments.

PO5: Comprehend professional and ethical responsibility in computing profession. PO6: Express effective communication skills.

PO7: Recognize the need for interdisciplinary and an ability to engage in life-long learning.

PO8: Knowledge of contemporary issues and emerging developments in computing profession.

PO9: Utilize the techniques, skills and modern tools, for actual development process

### **Course Outcomes**

#### **B.C.A.-I Sem-I**

##### **Course Code: CC 101 Fundamentals of Computer**

1. Understand basic concepts of computer.
2. Describe peripheral devices and number systems.
3. Understand operating environment
4. Demonstrate the use of Linux Operating system commands

##### **Course Code: CC 102 Introduction to Programming using 'C'**

1. Able to implement the algorithms and draw flowcharts for solving Mathematical problem.
2. Ability to design and develop Computer programs, analyzes, and interprets the concept of pointers, declarations, initialization, operations on pointers and their usage.
3. Able to define data types and use them in simple data processing applications.

##### **Course Code: AEC 103 Principles of Management**

1. Understand the influence of historical forces on current practice of mgmt.
2. Understand frameworks in the four functions of management.
3. Understand leadership styles to anticipate the consequences of each style

4. Be able to identify and apply appropriate management techniques for Orgn.
5. Understand social responsibility involved in business situations

**Course Code: AEC 104 Business Communication**

1. Communicate in English in written as well as oral mode
2. Make presentations in English
3. Do effective business correspondence

**Course Code: AEC 105 Office Automation**

1. Understand the components of office automation
2. Perform operations using MS Word and PowerPoint
3. Surf details through Internet

**Course Code: CCL 106 Lab Course-I based on CC 102**

1. Understand and trace the execution of programs written in C language.
2. Write the C code for a given algorithm
3. Implement program with pointers & arrays, perform pointer arithmetic.

**Course Code: CCL107 Lab Course based on AEC107**

1. Use internet & internet tools
2. Performs operations using MS-Word & MS-Powerpoint
3. Create business presentation using Powerpoint.

**B.C.A.- I Sem-II**

**Course Code: CC 201 Database Management System**

1. Describe basic concepts of DBMS
2. Demonstrate the principles behind systematic database design approaches.
3. Learn MS-Access for database creation & handling transaction.

**Course Code: CC 202 Operating System**

1. Possess knowledge of Operating Systems and their types.
2. Apply the concept of a process and scheduling algorithms.
3. Realize the concept of deadlock and different ways to handle it.

**Course Code: CC 203 Object Oriented Prog.Using C++**

1. Understand object-oriented programming and advanced C++ concept
2. Apply the concepts of object, classes and constructor.
3. Implement concept of polymorphism in program.

**Course Code: AEC 204 Financial Accounting with Tally**

1. Use basic accounting terminology, procedures and systems of accounts.
2. Understand financial statements
3. Demonstrate MIS reports in Tally ERP.

**Code: AEC 205 Mathematical Foundation for Comp. Applications**

1. Basic knowledge of set theory, functions and relations concepts  
matrix needed for designing and solving problems.
2. Use graph algorithms to solve problems.
3. Construct simple mathematical proofs and possess the ability to verify them.

**Course Code: CCL 206 Lab Course-III based on CC 201 & AEC 204**

- 1) Use MS-Access DBMS and design database
- 2) Perform operations on data using MS access features
- 3) Create company using Tally ERP
- 4) Perform accounting using Tally ERP

**Course Code: CCL 207 Lab Course-IV based on CC 203**

- i. Understand the difference between the top-down and bottom-up approach.
- ii. Describe the object-oriented programming approach in connection with C+
- iii. Apply the concepts of object-oriented programming.
- iv. Illustrate the process of data file manipulations using C++

**B.C.A.- II Sem-III**

**Course Code: CC 301 Web Technology**

1. Understand basics of website and web development life cycle.
2. Design website using HTML and CSS
3. Implement client side scripting for website development
4. Understand importance and working of HTML5

**Course Code: CC 302 Computer Network & Internet**

- 1) Understand the concept of computer network.
- 2) Identify different components required to build different networks.
- 3) Recognize the functions of network layers and different protocols.
- 4) Discuss the important features of the Internet and Web.

**Course Code: CC 303 Data Structure using C**

1. Understand various searching & sorting technique.
2. Implementing various data structures viz. Stacks, Queues.
3. Implementation of Linked Lists and Trees.

**Course Code: AEC 304 Elements of Statistics**

- 1) Explain various term used in Statistics.
- 2) Describe the Measures of Central Tendency and Dispersion
- 3) Understand Analysis of Bivariate data(Correlation and Regression)
- 4) Elaborate Sampling Techniques and Time Series Analysis.

**Course Code: AEC 305 HRM & Materials Management**

- 1) Understand Human Resource Planning Process.
- 2) Explain functions of material management.
- 3) Demonstrate 5 R in purchasing and Inventory control techniques.

**Course Code: CCL 306 Lab Course V based on CC301**

1. Understand Web Design Concept
2. Design Web Pages using CSS, HTML & Java Script

**Course Code: CCL 307 Lab Course VI based on CC303**

1. Implement various data structures viz. Stacks, Queues, Linked Lists & trees
2. Apply Ms Excel features for Data Manipulation and Analysis.

**B.C.A.- II Sem-IV****Course Code: CC 401 RDBMS**

- 1) Describe the fundamental elements of Relational Database Management Systems.
- 2) Explain various commands in data languages with example.
- 3) Explain various commands in data languages with example.
- 4) Understand various subqueries & joins.

**Course Code: CC 402 Software Engineering**

1. Develop SRS system.
2. Use of analysis and design tools for system development.
3. Apply software engineering concepts in software development.

Course Code: CC 403 Dot Net Technology

1. Understand features of C# DOT NET.
2. Implement various server controls for website development.
3. Design and develop dynamic web application using ADO.Net

Course Code: CC 404 Entrepreneurship Development

- 1) Identify Business Opportunities and prepare business plan.
- 2) Know project finance agencies.
- 3) Understand New Opportunities and Challenges in digital entrepreneurship

Course Code: CCL 405 PHP

1. Understand the environment of PHP programming Language.
2. Develop web applications using PHP.

Course Code: CCL 406 Lab Course-VII based on CC401

1. Design database for business applications.
2. Use of queries ,Sub queries, join , view & stored procedures on databases.

Course Code: CCL 407 Lab Course-VIII based on CC 403

- 4) Design console applications using C#
- 5) Design web application using ASP.NET

Course Code: CCL 408 Mini Project

- 6) Implement fundamental domain knowledge of core courses for developing simple Business application.
- 7) Utilize the software development techniques, skills and modern tool.

### **B.C.A.- III Sem-V**

Course Code: CC 501 Java Programming

1. Understand the features of Java Language.
2. Demonstrate Object-Oriented Programming using Java.
3. Develop Multithreaded and Networking applications.
4. Design GUI applications using AWT and Swing.

Course Code: CC 502 Data Warehousing & Data Mining

1. Define the Data warehouse architecture and its Implementation.
2. Describe the Architecture of a Data Mining system.
3. Understand the various Data preprocessing Methods.

4. Perform classification and prediction of data

Course Code: CC 503 IT Security

1. Understand the concept and need of IT security.
2. Identify different security threats to information system.
3. Describe security controls used for IS security.
4. Understand provisions in IT Act 2000 and Design security policy for IT Organistaion.

Course Code: DSE 504 Elective-I Python Programming

- 1) Acquire programming skills in core Python.
- 2) Develop Python programs with conditionals and loops
- 3) Understand advance datatypes in Python Programming.
- 4) Develop problem solving skills.

Course Code: GE 505 Elective-II Digital Marketing

1. Learn the applications of Digital Marketing.
2. Analyze the different digital marketing avenues.
3. Examine digital marketing tools.
4. Build real life problems in the domain of digital marketing.

Course Code: CCL 506 Lab Course –IX based on CC 501

1. Implement the Concept of OOP in Java through simple programs.
2. Implementation & Evaluation of concept related to class & inheritance.

Course Code: CCL 507 Lab Course –X based on DSE 504

1. Demonstrate and use different Datatypes in Python
2. Apply various built looping statements and Modules provided by Python.

### **B.C.A.- III Sem-VI**

Course Code: CC 601 Cloud Computing

1. Understand the fundamental principles of Cloud Computing
2. Understand the importance of virtualization in distributed computing.
3. Explain the core concepts of the cloud computing paradigm
4. Describe cloud computing applications

Course Code: Elective-I DSE 602 R- Programming

1. Understand the fundamental syntax of R through practice exercises.
2. Describe the control statements and functions in R.
3. Use data visualization tools.
4. Analyze a data set in R and represent findings.

Course Code: Elective-II GE 603 M-Commerce

1. Understand the concepts and scope of E- Commerce
2. Differentiate between m commerce and E-Commerce.
3. Describe M commerce applications in industry.
4. Explain security issues and control measures in M-commerce.

Course Code: AEC 604 Soft Skills & Personality Development

1. Reflect on the importance of Professional behavior.
2. Articulate and adapt the various facets that make up one's personality.


Course Code: AEC 605 Industrial Visit

1. Linking existing knowledge with learning experience
2. Examining the gap between classroom theoretical training & practical learning in real life environment.

Course Code: CCI 606 Lab Course XI

1. Apply syntax of R through practice exercises.
2. Implement the control statements, functions, data visualization. in R

  
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