

**DEPARTMENT OF HOME ECONOMICS**

**Programme Outcome B.A.**

|                              |                                                                                                                                                                                                                                                                                        |
|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Department of Home Economics | After Successful completion of B.A. Three year Degree Program in Home Economics a student is able to develop his knowledge about the following Subject.                                                                                                                                |
| Programme Outcomes           | PO-1 Firstly Students know about family Resource of Management and Interior Decoration .<br>PO-2 Family Resource Management and Interior Decoration.<br>PO-3 Food Science and Nutrition .<br>PO-4 Food Science and Nutrition .<br>PO-5 Human Development .<br>PO-6 Human Development . |
| Programme Specific Outcomes  | POS-1 Student of Home-Eco. Get Fundamental Knowledge through theory and Practical.<br>POS-2 Understanding the Laboratory exercise and Handling of Various equipments.                                                                                                                  |

**Course Out Come B.A. Home Economics**

**Semester – I**

|                  |                                                                                                                                                                           |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Course Out Comes | After Completion of all Semester Student should be able to                                                                                                                |
|                  | CO-1 Introduction of Home Economics .<br>CO-2 Home Management and Family Resources.<br>CO-3 Decision Making .<br>CO-4 Element of Principal .<br>CO-5 Flower Arrangement . |

**Semester – II**

|                  |                                                                                                                                                                           |
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| Course Out Comes | After Completion of all Semester Student should be able to                                                                                                                |
|                  | CO-1 Family Housing .<br>CO-2 Work Simplification .<br>CO-3 Furniture Arrangement .<br>CO-4 Water Conservation .<br>CO-5 Job Opportunities self Employment and abilities. |

**Semester - III**

|                  |                                                                                                                                                                                                      |
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| Course Out Comes | After Completion of all Semester Student should be able to                                                                                                                                           |
|                  | CO-1 Introduction of Food and Nutrition.<br>CO-2 Energy giving Nutrients.<br>CO-3 Body Building Nutrient.<br>CO-4 Protecting and regulating Nutrients.<br>CO-5 Balanced Diet Meaning and Importance. |



#### Semester –IV

|                  |                                                                                                                                                                                                   |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Course Out Comes | After Completion of all Semester Student should be able to                                                                                                                                        |
|                  | CO-1 Definition of Dietetics, Dieticians, and Diet therapy.<br>CO-2 Digestive System Diseases.<br>CO-3 Food Cooking Importance.<br>CO-4 Food Preservation Meaning.<br>CO-5 Food Spoilage Meaning. |

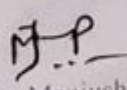
#### Semester –V

|                  |                                                                                                                                                                                                             |
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| Course Out Comes | After Completion of all Semester Student should be able to                                                                                                                                                  |
|                  | CO-1 Meaning Definition and Importance of Human Development.<br>CO-2 Male And Female Reproduction System.<br>CO-3 Motor Development, Meaning.<br>CO-4 Intellectual Development.<br>CO-5 Social Development. |

#### Semester –VI

|                  |                                                                                                                                              |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| Course Out Comes | After Completion of all Semester Student should be able to                                                                                   |
|                  | CO-1 Heredity, Meaning.<br>CO-2 Personality Development.<br>CO-3 Leadership.<br>CO-4 Adolescence Development.<br>CO-5 Parenting Importance . |



  
Dr. Ku. Manjusha Jagtap  
HOD Home Economics Dept.



# B.B.ARTS,N.B.COMMERCE AND B.P.SCIENCE COLLEGE, DIGRAS

## DEPARTMENT OF BOTANY

### Programme Outcomes B. Sc.

|                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
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| <b>Department of Botany</b>        | After successful completion of B.Sc three year degree program in Botany a student is able to,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Programme Outcomes</b>          | <p><b>PO-1.</b> Firstly students know about lower plants i.e cryptogams. Viruses, Bacteria, Fungi, Algae, Bryophyte, Pteridophyte</p> <p><b>PO-2.</b> Morphology of Angiosperms, Gymnosperms, Utilization of plants, Medicinal plants.</p> <p><b>PO-3.</b> Students describe morphological &amp; reproductive characters of plant and also identify different plant families and study the Classification.</p> <p><b>PO-4.</b> Cell biology gives knowledge about cell organelles &amp; their functions. Genetics Provides study of inheritance, Mendel's laws, genetic interactions, problems on Mendel's laws, multiple alleles.</p> <p><b>PO-5.</b> They know about plant physiology like plant water relations, photosynthesis, respiration, nitrogen metabolism, photoperiodism. Also studied plant ecology and environmental science. Plant adaptations like xerophytes, hydrophytes, various ecosystems, conservation of plants.</p> <p><b>PO-6.</b> Molecular biology gives knowledge about chemical properties of nucleic acid and their role in living system.</p> <p><b>PO-7.</b> Study various Botanical techniques and various equipments.</p> |
| <b>Programme Specific Outcomes</b> | <p><b>PSO-1.</b> Students of Botany get fundamental knowledge through theory and practicals.</p> <p><b>PSO-2.</b> Study the basis of plant life, reproduction, their conservation in nature.</p> <p><b>PSO-3.</b> Understand the laboratory exercises and handling of various equipments.</p> <p><b>PSO-4.</b> Understand the role of living and fossil plants in our life.</p> <p><b>PSO-5.</b> To create environmental awareness about cultivation techniques, conservation of rare species utilization of natural resources.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |



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|  | <p><b>PSO-6.</b> After completion of programme students know about advance techniques in plant sciences like tissue culture, agricultural biotechnology,</p> <p><b>PSO-7.</b> After Completion of programme students able to start nursery, improved varieties of crops, cultivation and formulations of herbal drugs, management of plant diseases.</p> |
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## Course Outcomes B. Sc.Botany

### Semester-I

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| <b>Course Outcomes</b>                                            | After completion of all semesters students should be able to                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>1S-Diversity &amp; Applications of Cryptogams and Microbes</b> | <p><b>CO-1.</b> Study plant diversity including viruses, Cyanbacteria, Bacteria</p> <p><b>CO-2.</b> General characters and diversity of algae.</p> <p><b>CO-3.</b> Classification, General characters of various forms of Fungi like Albugo, Puccinia . Study of Lichens.</p> <p><b>CO-4.</b> General characters, thallus organization and life cycle of various forms of Bryophyta.</p> <p><b>CO-5.</b> General characters, thallus organization and life cycle of various forms of Pteridophyta.</p> <p><b>CO-6.</b> Economic importance of algae, Applications of Mycorrhiza, Role of fungi in medicine ,food, agriculture. Study of plant pathology</p> |

### Semester-II

|                                                                           |                                                                                                                                                         |
|---------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Course Outcomes</b>                                                    | After completion of all semesters students should be able to,                                                                                           |
| <b>2SGymnosperms, Morphology of Angiosperms and Utilization of Plants</b> | <p><b>CO-1.</b> Study the process of fossilization and types of fossils.</p> <p><b>CO-2.</b> General characters of Gymnosperms. Life cycle of Pinus</p> |





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|  | <p>and Gnetum.</p> <p><b>CO-3.</b> Study the morphology of root ,stem, leaf. i<br/>nflorescence,flower.</p> <p><b>CO-4.</b> Study the morphology of inflorescence and<br/>flower.Types of placentation.Pollination.</p> <p><b>CO-5.</b> Understand morphology of fruits,Utilization of plants<br/>like food plants, fibre plants, oil yielding plants.</p> <p><b>CO-6.</b> Study utilization of plants like spices,firewood,<br/>bamboos,timber yielding plants. Pharmacognasy and<br/>phytochemistry of medicinal plants</p> |
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### Semester-III

|                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
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| <b>Course Outcomes</b>                                            | After completion of all semesters students should be able to                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>3S-Angiosperms<br/>Systematics,Antomy<br/>&amp; Embryology</b> | <p><b>CO-1.</b> Understand Origin &amp; Evolution,Botanical<br/>Nomenclature,preparation of herbaria,Botanical Gardens,Concept of<br/>Biodiversity.</p> <p><b>CO-2.</b> study systems of classification, Systematic study of<br/>dicotyledons(Polypetalae) .</p> <p><b>CO-3.</b> Systematic study of dicotyledons(Gamopetalae) Monocotyledons<br/>family. .</p> <p><b>CO-4.</b> Understand types of tissues Anatomy of root..</p> <p><b>CO-5.</b> Study anatomy of stem, anomalous structure in stem,antomy of<br/>leaf.</p> <p><b>CO-6.</b> Understand Microsporogenesis,Megasporogenesis,Types of<br/>ovules.</p> |

### Semester-IV

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|------------------------|--|
| <b>Course Outcomes</b> |  |
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|                                                   | After completion of all semesters students should be able to                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>4S-Cell Biology, Genetics and Biochemistry</b> | <p><b>CO-1.</b> Study cell concept, cell wall structure, structure and functions of nucleus, Plasma membrane, Chloroplasts.</p> <p><b>CO-2.</b> Understand Structure and functions of ER, Golgi complex, Vacuole, Ribosome, Mitochondrion, Mitosis and Meiosis .</p> <p><b>CO-3.</b> Structure of Chromosomes, Chromosomal aberrations, Numerical aberrations.</p> <p><b>CO-4.</b> Study Mendels laws, Intraction of Genes, Problems based on Mendelism.</p> <p><b>CO-5.</b> Study Concept and types of Linkage, Crossing over, Gene mutation.</p> <p><b>CO-6.</b> Understand Nomenclature and characteristics of enzymes, theories for mechanism of action of enzymes..</p> |

### Semester-V

|                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
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| <b>Course Outcomes</b>                 | After completion of all semesters students should be able to                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>5S-Plant Physiology and Ecology</b> | <p><b>CO-1.</b> Study Plant water relations-Diffusion, Osmosis, Imbibition, Plasmolysis, Absorption of water, Ascent of Sap, Transpiration.</p> <p><b>CO-2.</b> Understand plant metabolism like Photosynthesis, Respiration .</p> <p><b>CO-3.</b> Study Nitrogen metabolism, Growth Senescence and Abcission.</p> <p><b>CO-4.</b> Study plant responses like Photoperiodism, Vernalization, Plant movements, Stress physiology .</p> <p><b>CO-5.</b> Study Concept of environment, Scope of ecology, Ecological factors, Atmosphere and composition, Edaphic factor, Ecological adaptations.</p> <p><b>CO-6.</b> Understand Population ecology , Ecological Succession,</p> |





|  |             |
|--|-------------|
|  | Ecosystems. |
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### Semester-IV

| Course Outcomes                               | After completion of all semesters students should be able to                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>6S-Molecular Biology and Biotechnology</b> | <p><b>CO-1.</b> Study Chemical composition, Double helical model of DNA, DNA Replication, DNA packaging .</p> <p><b>CO-2.</b> Understand Fine structure of gene, Gene expression, Transcription in eukaryotes .</p> <p><b>CO-3.</b> Study Regulation of gene in Prokaryotes and Eukaryotes, Protein folding mechanism, Protein sorting.</p> <p><b>CO-4.</b> Study tools and techniques of r-DNA technology, Restriction enzymes, Cloning vectors, Gene transfer technique, Gene amplification..</p> <p><b>CO-5.</b> Study basic aspects of plant tissue culture, Laboratory requirements for tissue culture laboratory, Tissue culture techniques .</p> <p><b>CO-6.</b> Understand Applications of Biotechnology in agriculture, industry, health care and conservation .</p> |

*[Signature]*  
 Head  
 Department of Botany  
 B.B.Arts,N.B.Commerce &  
 B.P.Science College,Digras

*[Signature]*  
 Officiating Principal  
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**B. B. Arts, N.B. Commerce & B. P. Science College**

**Programme Outcomes (ENGLISH)**

1. To strengthen English Language of the students.
  2. To enhance communication skills of students: speaking, reading, writing and listening.
  3. To increase sound knowledge of English Grammar.
  4. To make the students able to communicate clearly and effectively.
  5. Enhancing the interest in English Language.
  6. After the completion of Degree, students will grow into a responsible and dutiful citizen.
  7. Attainment of programme outcomes, programme specific outcomes and course outcomes are evaluated by conducting following activities-
- a) Diagnostic Test
  - b) Unit Tests
  - c) Assignments
  - d) Seminar
  - e) Group Discussion
  - f) Tutorials
  - g) Guest Lecture
  - h) Common Test
  - i) Viva-voce
  - j) Counseling is given to slow learners.

*M. Bat*

*S. Kumar*  
Officiating Principal  
B.B.Arts, N.B. Commerce &  
B.P. Science College, Digras





**B. B. Arts, N.B. Commerce & B. P. Science College**

**Programme Outcomes (Marathi)**

1. Creating an interest in literature.
2. Availing the job opportunities in translation, transformation and media.
3. Increasing the critical attitude about literary studies.
4. Imbuing the literary research attitude.
5. Understanding the interrelation between literature and society.
6. Explaining the nature of language and literature.
7. Obtaining the skills of literary criticism.
8. Imbuing the essay writing skills.
9. Introduction of the medieval Marathi language and literature.
10. Acquaintance with oriental poetry.
11. Understanding the nature and features of poetry.
12. Creating the skill of critical appreciation of a poem.
13. Developing the poetic devices and their usages.
14. Understanding origin, nature and function of language.
15. Getting information about phonetics.
16. Enhancing the interest in Marathi language

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## Department of Economics

### Program outcomes, program specific outcomes and course outcomes.

#### COURSE OUTCOMES: B.A. ECONOMICS

##### B.A. PART – I (SEM – I MICRO ECONOMICS)

On completion of the course, students are able to

1. To understand nature and scope of economics, the theory of consumer behavior, analysis of production function and equilibrium of producer, the price formation in different markets structures and the equilibrium of a firm and Industry.
2. Student is expected to understand the behavior of an economics agent, namely, a consumer, a producer, a factor owner and the price fluctuation in market.
3. Understand concept of Revenues and cost of production.
4. Understand price determination of factors (Rent, wages, interest and Profit)

##### B.A. PART – I (SEM – II ECONOMICS OF MAHARASHTRA)

On completion of the course, students are able to

1. Understand Nature, Scope of Economy of Maharashtra.
2. Basic Characteristics and Major issues of Maharashtra Economy.
3. Understand population & economic development.
4. Understand role of agriculture, industrial sector in Maharashtra economy.
5. Understand salient features of Economy of Maharashtra.
6. Understand role of Vidharbha in Maharashtra Economy.

##### B.A. PART – II ( SEM – III MACRO ECONOMICS)

On completion of the course, students are able to

1. Understand macroeconomic analysis.
2. Understand of national Income.
3. Understand classical & Keynesian theories of output and employment.
4. Understand consumption & Investment function.
5. Understand various macroeconomic problems.
6. Understand various macroeconomic policies.

##### B.A. PART – II (SEM – IV) (BANKING)

On completion of the course, students are able to

1. Understand meaning and function of commercial Bank.





2. Create the awareness among the students of Modern Banking system.
3. Understand commercial banking system in India.
4. Understand working and operation of RBI.
5. Understand cooperative and rural banking in India.
6. Able to understand international aspects of the Indian financial system.

#### B.A. PART – III ( SEM – V) (INDIAN ECONOMY)

On completion of the course, students are able to

1. Understand nature, basic characteristics and major issues of the Indian economy.
2. Understand population and economic development.
3. Understand poverty and Unemployment Concepts and their trends in Indian economy.
4. Understand role of agriculture, industrial sector in Indian economy.
5. Understand economic planning in India.
6. Understand Regional Imbalance causes and preventive Measures.

#### B.A. PART – III ( SEM – VI) (DEMOGRAPHY)

On completion of the course, students are able to

1. Understand various theories of population.
2. Understand the concept of Population Explosion.
3. Understand the importance of population studies.
4. Understand Demography Features of India.
5. Understand the problems of Migration and Urbanization in India.

Understand the correlation between population and development.

*V. F. Rolte*  
Dr. V. F. Rolte

*S. M. M. M. M.*  
Officiating Principal  
B.B.Arts, N.B.Commerce &  
B.P.Science College, Digras





# Department of History

## Program Outcomes, Program Specific Outcomes and Course Outcomes

### Program Outcomes : B.A History (Optional Subject)

- Students enable to evaluate, analyze and synthesize historical materials (primary and secondary sources).
- Students enables to recognize and explain the historical development of cultures.
- Students understand to evaluate and recognize different empire in Indian history.
- Student identify the role of theory and methodology in the production of historical knowledge.
- Student identify and critique basic historical concept.

### Program Specific Outcomes : B.A History (Optional Subject)

On Completion of the B.A (History) Students are able to :

- A history graduate can find employment with Archaeological Survey of India or with private firms related to archaeology.
- For history graduate, the option of public service is always open.
- Work as a teacher in primary and high school.
- Serve as a conservator and tourist guide in historical monuments.
- NGOs and social welfare organizations also employ B.A history graduates.
- Writer/subject matter expert.

### Course Outcomes : B.A History

#### **B.A – I<sup>st</sup> Year (Semester – I & II)**

History of India : From Earliest Times to 1526 AD (Subject code : 1021)

1. Student got knowledge of literary and archaeological sources of ancient and medieval Indian history.
2. Student got knowledge of Harappan civilization, Vedic age, Buddhism, Jainism, Ganas and Mahajanpadas, Macedonian invasion
3. Students got knowledge of Mauryan empire, Sungas, Kushanas and Satvahanas, Gupta Age, Vakatakas.
4. Students got knowledge of Vardhan empire, Chalukyas of Badami, Pallawas, Cholas, the Arabs and Turk invasions





5. Student got knowledge of Sultanate period, Khilgi dynasty, Tughlaqs dynasty, Timur's invasion, Bahamani and Vijaynagarempire.
6. Students introduced with social, religious, economical and cultural aspects of thisera.
7. Students introduced with the status of women in thisage.

**B.A – II<sup>nd</sup> Year (Semester – III & IV)**

**History of India : From 1526 to 1947 AD (Subject code :1021)**

1. Students got knowledge of Mughal empire, Marathaempire.
2. Students got knowledge of administrative system in Mughal and Maratha empire.
3. Students got knowledge of social, religious, economic, cultural condition during Mughal and Marathaage.
4. Students got knowledge about the consolidation of British rule in India and the tools of expansion, diplomacy ofBritish.
5. Students got knowledge about the economic changes, social and cultural changes and the status of women during Britishrule.
6. Students got knowledge about the revolt of 1857 and the Indian Nationalist movement, constitutional developments during thisera.
7. Students got knowledge about Gandhian ideology and movements, revolutionary movement and left wingmovement.
8. Students got knowledge about Subhashchandra Bose and Indian National Army, Partition of Indian, Act of IndianIndependence.

**B.A – III<sup>rd</sup> Year (Semester – V & VI)**

**History of Modern World (From 1780 to 1965 AD) (Subject code : 1021)**

1. Students got knowledge about French revolution, Napoleon Bonaparte, congress of Vienna (1815AD)
2. Students got knowledge about Nation state of Italy and Germany, policy of Bismark and Kaiser William II, Triple Entente, Russo-Japanese war and the First WorldWar.
3. Students introduced with the concept of Communism,Capitalism, Socialism
4. Students got knowledge about the Russian revolution, Paris peace conference, Versailles treaty, the league of Nation's, the economic crises of1929.
5. Students got knowledge about Mussolini and Hitler, the Second



- World War, the United Nations, the concept of Cold War, NATO, Warsaw, SEATO, CENTO, Suez crisis, European Union, European Common Market, Commonwealth Nation, Berlin crisis.
6. Students got knowledge about Non-alignment movement and the Third World.

Head  
Department of History

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## **Department of Political Science**

### **Program Outcomes: B. A. Political Science**

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**After completion of B. A. in Political Science student should be able to-**

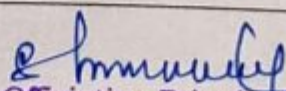
1. Students enable to discuss the major theories and concepts of Political Science and its other branches, they also deliver thoughtful and well articulate presentations of research findings.
  2. Students enable to analyze socio-economic, political and policy problems and formulate policy options.
  3. Students enable to develop academic proficiency in sub-fields of Indian Constitutional Provisions and local Self Government, Selected Constitutions, International Relations, Modern Concepts of Political Science, Concepts of Western and Indian Political Thinkers, International and Regional Organizations, Political Theory, Political Ideology, Comparative Government and Politics.
  4. Students enable to develop and be able to demonstrate skills in conducting as well as presenting research in political science and help to government and citizens.
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### **Program Specific Outcomes: B. A. in Political Science**

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**After Completion of B. A. in Political Science Students are able to:**

1. Can admit to M. A. in Political Science, L.L.B., M.S.W., M.B.A., B.Ed., B.P. Ed.
  2. Can Prepare for Civil Services.
  3. Serve as Political Analyzer and member of think tank of Political Leaders.
  4. Serve as Political Party member, Political adviser, and well Citizen of India.
  5. Serve as Politician
  6. Work as a teacher in schools, high schools and colleges.
  7. Work in elections and political as well as administrative system.
  8. Work in NGOs.
  9. Serve in other corporate sectors.
- 

  
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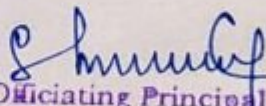


## B. A. Part I

### Indian Constitutional Provisions and Local Self Government

(Semester I)

1. Students enable to know the salient features of Indian Constitution.
2. Students enable to appreciate the Fundamental Rights and Duties and the Directive Principles of the State Policy.
3. Students enable to understand the importance of the Preamble of Indian Constitution.
4. Students enable to know the Method to acquire Indian Citizenship.
5. Students enable to understand the Powers Functions and role of the President and Vice President of India.
6. Students enable to know the Appointment, Role and Functions of the Prime Minister.
7. Students enable to understand the Parliamentary System and Structure, Powers and Functions of Loksabha and Rajyasabha.
8. Students enable to know the Powers and Functions of Speaker of Loksabha.
9. Students enable to understand the Structure of Indian Judiciary, Types of Court, Characteristics of Indian Judiciary.
10. Students enable to know the Structure, Powers, Functions and Jurisdictions of Supreme Court and High Court.

  
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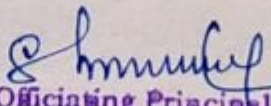




**B. A. Part I**  
**Indian Constitutional Provisions and Local Self Government**  
**(Semester II)**

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1. Students enable to understand the Structure, Functions and Powers of Election Commission of India.
  2. Students enable to understand the Electoral Reforms and Recognition of Political Parties in India.
  3. Students enable to know the Eligibility of Voters in Lok Sabha, Vidhan Sabha (Legislative Assembly) and Vidhan Parishad (Legislative Council)
  4. Students enable to understand the State Executive: Appointment, Role, Powers and Functions of Governor, Chief Minister and Council Of Ministers.
  5. Students enable to understand to State Legislature of Maharashtra.
  6. Students enable to understand the Structure, Powers and Functions of Legislative Assembly (Vidhan Sabha) and Legislative Council (Vidhan Parishad).
  7. Students enable to understand Local Self Government of Maharashtra.
  8. Students enable to understand types of Local Self Government (Rural and Urban).
  9. Students enable to understand the Structure, Powers and Functions of Municipal Corporation, Gram Sabha and Gram Panchayat. And also know the Women's Participation in Panchayat Raj of Maharashtra.
  10. Students enable to understand Nagpur Pact for Sanyukta Maharashtra and its Recommendations.
  11. Students enable to understand the Right to Information and its Importance.
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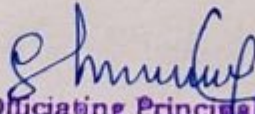
## **B. A. Part II**

### **Selected Constitutions and International Relations**

**(U.K., U.S.A. & China)**

**(Semester I)**

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1. Students enable to understand the Salient Features of the Constitution of U. K.
  2. Students enable to know the Historical Background of Crown and also understand the Appointment, Powers, Functions and Role of Prime Minister and Cabinet in U. K.
  3. Students enable to understand the Parliamentary System of U. K.
  4. Students enable to know the Composition, Powers and Functions of House of Lords and House of Commons, with Reference to Constitutional Reforms Act-2005.
  5. Students enable to know the Role of Opposition and Shadow Cabinet of U.K.
  6. Students enable to understand the Salient Features of the Constitution of U. S. A.
  7. Students enable to know the Election Process, Powers and Functions of the President and Vice President and also understand the Structure and Functions of the Cabinet of U.S.A
  8. Students enable to know the Legislature of U. S.A. (Congress): Composition, Powers and Functions of Senate and House of Representative.
  9. Students enable to understand the Composition, Powers and Functions of the Supreme Court of U. S. A.
  10. Students enable to know the South Asian Association for Regional Cooperation (SAARC), Its Objectives, Structure and Functions.
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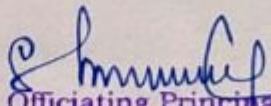




**B. A. Part II**  
**Selected Constitutions and International Relations**  
**(U.K., U.S.A. & China)**  
**(Semester II)**

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1. Students enable to understand the Salient Features of the Constitution of China (1982)
  2. Students enable to know the Legislature of China: Composition, Powers and Functions of National People Congress and also know the Composition, Powers and Functions of Standing Committee.
  3. Students enable to know the Appointment, Powers and Functions of the President and Prime Minister of China.
  4. Students enable to know the Role of the Communist Party in China.
  5. Students enable to understand the United Nation Organization (UNO): its Charter, Aims and Basic Principles.
  6. Students enable to understand the Composition and Functions of General Assembly and Security Council.
  7. Students enable to understand the Appointment, Powers and Functions of Secretary General of U. N. O.
  8. Students enable to understand the Composition and Powers of International Court of Justice.
  9. Students enable to know the Indo – China Relations.
  10. Students enable to understand the Tibet Dispute, Role of China about India in UNO and Impact of Chinese Goods and Market on Indian Economy.
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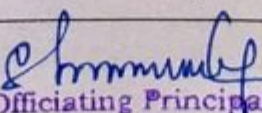
**B. A. Part Final**  
**Semester – V**  
**Modern Concepts and Policy in Politics**

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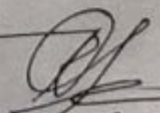
1. Students enable to understand the Meaning, Factors and Role of Leadership.
2. Students enable to know the Meaning and Nature of Indian Reservation Policy.
3. Students enable to understand the Reservation in Indian Parliament and Reservation and Politics in India.
4. Students enable to know the Meaning and Nature, Factors of Nationalism and also understand the Present Status of Indian Nationalism.
5. Students enable to understand the Meaning of Communalism, Role of Communalism and Present Status of Communalism in India.
6. Students enable to understand the Meaning and definition, Kinds of Terrorism.
7. Students enable to understand the Acts for Prevention of Terrorism in India.

**B. A. Part Final**  
**Semester – VI**  
**Concepts of Western and Indian Thinkers**

1. Students enable to understand the Concept of State: i) Aristotle – Classification of State, ii) M. K. Gandhi – Concept of Ramrajya.
2. Students enable to understand the Concept of Walter Bagehot's and Abraham Lincoln's concept of Democracy.
3. Students enable to understand the Concept of Parliamentary Democracy of Dr. B. R. Ambedkar.
4. Students enable to understand the Concept of Nationalism of Niccolo Machiavelli, Swami Vivekananda and V. D. Sawarkar.
5. Students enable to understand the Concept of Socialism of Karl Marks, Ram ManoharLohiya and Pandit Jawaharlal Nehru.
6. Students enable to understand the Concept of Behaviouralism of DevidEston and also Know the concept of Post-Behaviouralism of Gabriel Almond.
7. Students enable to understand the Concept of Sovereignty of John Austin.

  
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12.06.08.2021



## DEPARTMENT OF BOTANY

### Programme Outcomes B. Sc.

|                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Department of Botany</b>        | After successful completion of B.Sc three year degree program in Botany a student is able to,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Programme Outcomes</b>          | <p><b>PO-1.</b> Firstly students know about lower plants i.e cryptogams. Viruses, Bacteria, Fungi, Algae, Bryophyte, Pteridophyte</p> <p><b>PO-2.</b> Morphology of Angiosperms, Gymnosperms, Utilization of plants, Medicinal plants.</p> <p><b>PO-3.</b> Students describe morphological &amp; reproductive characters of plant and also identify different plant families and study the Classification.</p> <p><b>PO-4.</b> Cell biology gives knowledge about cell organelles &amp; their functions. Genetics Provides study of inheritance, Mendel's laws, genetic interactions, problems on Mendel's laws, multiple alleles.</p> <p><b>PO-5.</b> They know about plant physiology like plant water relations, photosynthesis, respiration, nitrogen metabolism, photoperiodism. Also studied plant ecology and environmental science. Plant adaptations like xerophytes, hydrophytes, various ecosystems, conservation of plants.</p> <p><b>PO-6.</b> Molecular biology gives knowledge about chemical properties of nucleic acid and their role in living system.</p> <p><b>PO-7.</b> Study various Botanical techniques and various equipments.</p> |
| <b>Programme Specific Outcomes</b> | <p><b>PSO-1.</b> Students of Botany get fundamental knowledge through theory and practicals.</p> <p><b>PSO-2.</b> Study the basis of plant life, reproduction, their conservation in nature.</p> <p><b>PSO-3.</b> Understand the laboratory exercises and handling of various equipments.</p> <p><b>PSO-4.</b> Understand the role of living and fossil plants in our life.</p> <p><b>PSO-5.</b> To create environmental awareness about cultivation techniques, conservation of rare species utilization of natural resources.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

  
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|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p><b>PSO-6.</b> After completion of programme students know about advance techniques in plant sciences like tissue culture, agricultural biotechnology,</p> <p><b>PSO-7.</b> After Completion of programme students able to start nursery, improved varieties of crops, cultivation and formulations of herbal drugs, management of plant diseases.</p> |
|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

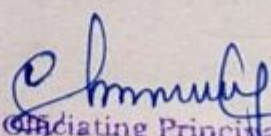
## Course Outcomes B. Sc.Botany

### Semester-I

| Course Outcomes                                        | After completion of all semesters students should be able to                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|--------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 15-Diversity & Applications of Cryptogams and Microbes | <p><b>CO-1.</b> Study plant diversity including viruses, Cyanbacteria, Bacteria</p> <p><b>CO-2.</b> General characters and diversity of algae.</p> <p><b>CO-3.</b> Classification, General characters of various forms of Fungi like Albugo, Puccinia . Study of Lichens.</p> <p><b>CO-4.</b> General characters, thallus organization and life cycle of various forms of Bryophyta.</p> <p><b>CO-5.</b> General characters, thallus organization and life cycle of various forms of Pteridophyta.</p> <p><b>CO-6.</b> Economic importance of algae, Applications of Mycorrhiza, Role of fungi in medicine ,food, agriculture. Study of plant pathology</p> |

### Semester-II

| Course Outcomes                                                    | After completion of all semesters students should be able to                                                                                                        |
|--------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 25Gymnosperms, Morphology of Angiosperms and Utilization of Plants | <p><b>CO-1.</b> Study the process of fossilization and types of fossils.</p> <p><b>CO-2.</b> General characters of Gymnosperms. Life cycle of Pinus and Gnetum.</p> |

  
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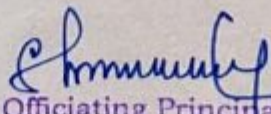
|  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p><b>CO-3.</b>Study the morphology of root ,stem, leaf. i nflorescence,flower.</p> <p><b>CO-4.</b> Study the morphology of inflorescence and flower.Types of placentation.Pollination.</p> <p><b>CO-5.</b>Understand morphology of fruits,Utilization of plants like food plants, fibre plants, oil yielding plants.</p> <p><b>CO-6.</b>Study utilization of plants like spices,firewood, bamboos,timber yielding plants. Pharmacognasy and phytochemistry of medicinal plants</p> |
|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### Semester-III

|                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-----------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Course Outcomes</b>                                    | After completion of all semesters students should be able to                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>3S-Angiosperms Systematics,Antomy &amp; Embryology</b> | <p><b>CO-1.</b> Understand Origin &amp; Evolution,Botanical Nomenclature,preparation of herbaria,Botanical Gardens,Concept of Biodiversity.</p> <p><b>CO-2.</b>study systems of classification, Systematic study of dicotyledons(Polypetalae) .</p> <p><b>CO-3.</b> Systematic study of dicotyledons(Gamopetalae) Monocotyledons family.</p> <p><b>CO-4.</b> Understand types of tissues Anatomy of root..</p> <p><b>CO-5.</b> Study anatomy of stem, anomalous structure in stem,antomy of leaf.</p> <p><b>CO-6.</b> Understand Microsporogenesis,Megasporogenesis,Types of ovules.</p> |

### Semester-IV

|                        |                                                              |
|------------------------|--------------------------------------------------------------|
| <b>Course Outcomes</b> | After completion of all semesters students should be able to |
|------------------------|--------------------------------------------------------------|

  
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|                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|---------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>4S-Cell Biology, Genetics and Biochemistry</b> | <p><b>CO-1.</b> Study cell concept, cell wall structure, structure and functions of nucleus, Plasma membrane, Chloroplasts.</p> <p><b>CO-2.</b> Understand Structure and functions of ER, Golgi complex, Vacuole, Ribosome, Mitochondrion, Mitosis and Meiosis .</p> <p><b>CO-3.</b> Structure of Chromosomes, Chromosomal aberrations, Numerical aberrations.</p> <p><b>CO-4.</b> Study Mendels laws, Intraction of Genes, Problems based on Mendelism.</p> <p><b>CO-5.</b> Study Concept and types of Linkage, Crossing over, Gene mutation.</p> <p><b>CO-6.</b> Understand Nomenclature and characteristics of enzymes, theories for mechanism of action of enzymes..</p> |
|---------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### Semester-V

|                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Course Outcomes</b>                 | <p>After completion of all semesters students should be able to</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>5S-Plant Physiology and Ecology</b> | <p><b>CO-1.</b> Study Plant water relations-Diffusion, Osmosis, Imbibition, Plasmolysis, Absorption of water, Ascent of Sap, Transpiration.</p> <p><b>CO-2.</b> Understand plant metabolism like Photosynthesis, Respiration .</p> <p><b>CO-3.</b> Study Nitrogen metabolism, Growth Senescence and Abcission.</p> <p><b>CO-4.</b> Study plant responses like Photoperiodism, Vernalization, Plant movements, Stress physiology .</p> <p><b>CO-5.</b> Study Concept of environment, Scope of ecology, Ecological factors, Atmosphere and composition, Edaphic factor, Ecological adaptations.</p> <p><b>CO-6.</b> Understand Population ecology , Ecological Succession, Ecosystems.</p> |





## Semester-IV

|                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Course Outcomes</b>                        | After completion of all semesters students should be able to                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>6S-Molecular Biology and Biotechnology</b> | <p><b>CO-1.</b> Study Chemical composition, Double helical model of DNA, DNA Replication, DNA packaging .</p> <p><b>CO-2.</b> Understand Fine structure of gene, Gene expression, Transcription in eukaryotes .</p> <p><b>CO-3.</b> Study Regulation of gene in Prokaryotes and Eukaryotes, Protein folding mechanism, Protein sorting.</p> <p><b>CO-4.</b> Study tools and techniques of r-DNA technology, Restriction enzymes, Cloning vectors, Gene transfer technique, Gene amplification..</p> <p><b>CO-5.</b> Study basic aspects of plant tissue culture, Laboratory requirements for tissue culture laboratory, Tissue culture techniques .</p> <p><b>CO-6.</b> Understand Applications of Biotechnology in agriculture, industry, health care and conservation .</p> |

*Shruti*  
(Dr. M. M. D. Hore)

*Shruti*  
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B.B.Arts, N.B.Commerce and B.P.Science College, Digras.

Department of Chemistry

**Programme Outcome: Bachelor of Science:-**

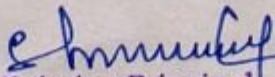
1. Student will be able to understand the fundamentals of science.
2. Student will have acquired basic knowledge of science.
3. Disciplinary approach will be developed amongst the students.
4. Scientific responsibility, social and environmental awareness will have inculcated amongst the students.
5. Students will voluntarily contribute in the development of Nation.

**Specific Programme Outcome: Chemistry :-**

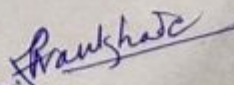
1. Develops students ability about basic framework and concepts of Chemistry.
2. Improve practical skills and knowledge among the students.
3. Activate students in different curricular, co-curricular and extension activities.
4. Gives correct information about subject within students.

**Course Outcome:- Chemistry U.G.:-**

1. Develops ability of problem solving, critical thinking and analytical reasoning.
2. Students will be able to use modern instrumentation and classic techniques to design experiments.
3. Creates awareness about chemical safety and chemical hygiene.
4. Students can understand the central role of Chemistry in our society with respect to issues viz. environmental energy, health and hygiene.
5. Students can make the society aware of food adulteration and superstition.

  
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B. Sc. PHYSICS

PROGRAMME / COURSE OUTCOME

| S.N. | Class     | Semester   | Course                                                  | Course outcome                                                                                                                                           |
|------|-----------|------------|---------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | B.Sc. I   | 1S-Physics | Mechanics, Properties of Matter, Waves & Oscillations   | To explain law of gravitation, planetary motion, rigid body motion, S.H.M, Moment of inertia, Elasticity, moving fluids etc.                             |
|      |           | 2S-Physics | Kinetic Theory, Thermodynamics and Electric Currents    | To illustrate kinetic theory of gases, laws of thermodynamics, Network theorems, Varying and alternating Currents                                        |
| 2    | B.Sc. II  | 3S-Physics | Electrostatics, Magnetostatics, Electronics, Relativity | To understand Mathematical background, Maxwell's equations, Special theory of relativity, Geophysics                                                     |
|      |           | 4S-Physics | Optics, Fibre Optics Lasers, Renewable Energy           | To explain the concept of interference, diffraction, polarization fibre optics, lasers, renewable energy sources                                         |
| 3    | B.Sc. III | 5S-Physics | Quantum Spectroscopy, Nuclear Physics, Electronics      | To understand the concepts of de Broglie hypothesis, Schrodinger's equations, Atomic & Molecular Spectroscopy, Hybrid Parameters, Feedback, Oscillators. |
|      |           | 6S-Physics | Statistical Crystallography, Solid State Physics,       | To illustrate the M.B, B.E. & F.D. Statistics, crystallography, Band structures, Electrical & magnetic properties, Superconductivity, Nanotechnology.    |

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*V.K.Jadhao*  
 (Dr. V.K.Jadhao)

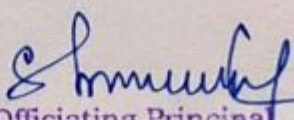


**B.B. ARTS, N.B. COMMERCE AND B.P. SCIENCE COLLEGE,  
DIGRAS**

**DEPARTMENT OF ZOOLOGY**

**Programme Outcomes, Programs Specific Outcome and Course Outcome.**

|                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Department of Zoology       | After successful completion of B.Sc three year degree program in Zoology a student is able to,                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Programme Outcomes          | <p><b>PO-1.</b> Understand history of Phylum of Non-Chordata&amp;Chordata</p> <p><b>PO-2.</b> Demonstration &amp; understand the major concepts in Zoology.</p> <p><b>PO-3.</b> To study &amp; understand the classification of whole phyla of Non-Chordates &amp; Chordates with the help of specimens/models/pictures.</p> <p><b>PO-4.</b> Create awareness in students about biodiversity of Non-Chordates &amp; Chordates</p> <p><b>PO-5.</b> To create awareness of the impact of Zoology on the environment, society and development outside the scientific community</p> <p><b>PO-6.</b> To inculcate the scientific temperament in the students and outside the scientific community.</p> |
| Programme Specific Outcomes | <p><b>PSO-1.</b> Gain the knowledge of Zoology through theory &amp; practical.</p> <p><b>PSO-2.</b> Use modern zoological tools, models, charts, specimens &amp; equipments.</p> <p><b>PSO-3.</b> Understand the good laboratory practices and safety.</p> <p><b>PSO-4.</b> Make aware &amp; handle the sophisticated instruments/equipments.</p> <p><b>PSO-5.</b> To develop research oriented skills.</p>                                                                                                                                                                                                                                                                                       |

  
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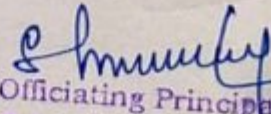
## Course Outcomes B. Sc. Zoology

### Semester - I

| Course Outcomes                       | After completion of all semesters students should be able to                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|---------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1S-Life and Diversity of Non-Chordata | <p><b>CO-1.</b> Understand the evolution, history of phylum.</p> <p><b>CO-2</b> Understand about the non-chordate animals.</p> <p><b>CO-3.</b> To study the external as well as internal character of non- Chordate.</p> <p><b>CO-4.</b>to study the distinguishing character of non-chordate.</p> <p><b>CO-5.</b>understand economic importance of some non-chordate animals.</p> <p><b>CO-6.</b> Understand various internal systems.</p> <p><b>CO-7.</b> Understand various diseases caused by protozoan parasite.</p> |

### Semester-II

| Course Outcomes                   | After completion of all semesters students should be able to                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2S-cell and developmental biology | <p><b>CO-1.</b> Understand the terms of physiology.</p> <p><b>CO-2.</b> To study the muscle physiology, nerve physiology and reproductive physiology.</p> <p><b>CO-3.</b> To study the histology of various organs and endocrine glands.</p> <p><b>CO-4.</b> Understand the economic importance of insects.</p> <p><b>CO-5.</b> Understand the details of aquaculture.</p> <p><b>CO-6.</b> To understand significance of beneficial and harmful insects.</p> |

  
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### Semester-III

|                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                              |
|--------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Course Outcomes</b>                                             | <b>Life and diversity of chordata and concept of evolution.</b>                                                                                                                                                                                                                                                                                                                                              |
| <b>3S- Life and diversity of chordata and concept of evolution</b> | <p><b>CO-1.</b>understand history of phylum chordata.</p> <p><b>CO-2.</b>To study the external as well as internal characters of chordates.</p> <p><b>CO-3.</b>To study the distinguishing characters of chordates.</p> <p><b>CO-4.</b> Understand the evolution.</p> <p><b>CO-5.</b> Understand diversity of chordate animals among various graph.</p> <p><b>CO-6.</b> To study the adaptive radiation.</p> |

### Semester-IV

|                                               |                                                                                                                                                                                                                                                                                                                                                                                           |
|-----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Course Outcomes</b>                        | <b>After completion of all semesters students should be able to</b>                                                                                                                                                                                                                                                                                                                       |
| <b>4S-Advance genetics and animal ecology</b> | <p><b>CO-1.</b>To study Mendel's law's of hereditary and interaction o gene.</p> <p><b>CO-2.</b> Understand the terms linkage, crossing over, multiple alleles and sex determination disorders.</p> <p><b>CO-3.</b> Aware the students with genetic disorders.</p> <p><b>CO-4.</b> To study different concepts in ecology.</p> <p><b>CO-5.</b> To study different types of ecosystem.</p> |



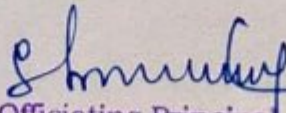


### Semester-V

|                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|---------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Course Outcomes</b>                            | After completion of all semesters students should be able to                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>5S –Animal physiology and economic zoology</b> | <p><b>CO-1.</b> Understand the term of physiology.</p> <p><b>CO-2.</b> To study the muscle physiology, nerve physiology and reproductive physiology.</p> <p><b>CO-3.</b> To study the histology of various organs and endocrine glands.</p> <p><b>CO-4.</b> Understand the economic importance of insects.</p> <p><b>CO-5.</b> Understand the details of aquaculture.</p> <p><b>CO-6.</b> Understand the significance of beneficial and harmful insects.</p> |

### Semester-VI

|                                               |                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Course Outcomes</b>                        | After completion of all semesters students should be able to                                                                                                                                                                                                                                                                                                                                    |
| <b>6S-Molecular Biology and Biotechnology</b> | <p><b>CO-1.</b> Understand the tools and techniques used in molecular biology and biotechnology.</p> <p><b>CO-2.</b> To study types of mutation.</p> <p><b>CO-3.</b> To study genetic material, protein synthesis, and concepts of gene</p> <p><b>CO-4.</b> Understand the terms DNA fingerprinting, ELISA technique and RIYA technique</p> <p><b>CO-5</b> To study concepts in immunology.</p> |

  
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Signed  
 Dr. S.K. Parate.

# **B. B. Arts, N.B. Commerce & B. P. Science College**

## **Course outcome of Mathematics**

### **Semester I: Course outcome of Algebra and Trigonometry**

Students will able to-

1. Solve algebraic equation and find the  $n^{\text{th}}$  root of complex number by using Demoivres Theorem.
2. Solve the different types of series.
3. Define quaternion, inverse of quaternion.
4. Solve cubic equation by cardons method and determine nature of roots by Descartes rule.
5. Solve simultaneous equation and find Eigen values and roots verify cayley Hamilton Theorem.

### **Semester I: Course outcomes of Calculus**

Students will able to-

1. Prove the given real number is limit of function by using epsilon delta definition of limit of function.
2. Decide the different type of Discontinuity.
3. Find the limit of function by L-Hospital's Rule.
4. Find  $n^{\text{th}}$  derivation of product of the functions by Lebnitz theorem.
5. Expand function by Tailor's Theorem.
6. Find partial derivative and verify Euler's theorem on homogenous function.
7. Find the reduction formulae of given integrals.

### **Semester II: Course outcome of Differential equation**

Students will able to-

1. Solve first order ordinary differential equation by variable separation method and homogenous differential equation.
2. Solve first order linear differential equation, Bernoulli's D. E. and Differential equation solvable for p, x, y.
3. Solve the second order differential equation with constant coefficient and variable coefficient.
4. Solve D.E. of second order by different method such as change of dependent and independent variables, reducing to normal form and variation of parameter method.
5. Solve first order partial D. E. and second order partial D. E.
6. Solve non homogenous partial D.E. by Charpits Method.





### **Semester II: Course outcome of Vector analysis and geometry**

Students will able to-

1. Find scalar and vector product of three or four vectors.
2. Find curvature and torsion of different types of curves.
3. Evaluate line integral and work done by Green's theorem and direct method.
4. Find equation of sphere and verify the condition of orthogonal sphere.
5. Find equation of cone, right circular cone, cylinder, right circular cylinder.

### **Semester III: Course outcome of Advance calculus**

Students will able to-

1. Decide convergence and divergence of sequence.
2. Decide convergence and divergence of series by using comparison test, Cuschy integral test, ratio test, root test, Lebnitz rule and Abels test.
3. Expand the function of two variables by Tailor's theorem.
4. Find maxima and minima of function of two variables by second derivative test and Lagranges multiplier method.
5. Draw the region of double integral and evaluate it.

### **Semester III: Course outcome of Number theory**

Students will able to-

1. Find greatest common divisor by division algorithm and Euclidean algorithm method.
2. Find least common multiple and greatest common divisor by prime factorization.
3. Define prime numbers, composite numbers and Fermat numbers.
4. Define congruence relation and solve linear congruence.
5. Find the Euler's function, Tow and Sigma functions and define arithmetic and Mobius function.

### **Semester IV: Course outcome of Modern Algebra**

Students will able to-

1. Define group, subgroup, cyclic groups, permutation group and order of an element.
2. Define cosets, normal subgroup and quotient group, cyclic subgroups, and understand the structure and characteristics of these subgroups.
3. Define homomorphism, isomorphism, kernel and range of homomorphism.
4. Define ring, types of ring, integral domain and field.
5. Define ideal, quotient ideal and describe identity element of quotient ideal.



#### Semester IV: Course outcome of Classical mechanics

Students will able to-

1. Define constraints and use D'Alemberts principle.
2. Find extremals of function.
3. State Hamilton Principle.
4. Find Eulerian angle.

#### Semester V: Course outcome of Mathematical analysis

Students will able to-

1. Decide integrability of functions.
2. Test the convergence & divergence of improper integral.
3. Verify Cauchy – Reimann equation and find the analytic function by Milne Thomson method.
4. Find critical points and decide the types of transformation.

#### Semester V: Course outcome of Mathematical methods

Students will able to-

1. Find Fourier series, Fourier series of even and odd function.
2. Find Laplace transform of elementary function.
3. Solve ordinary D. E., partial D. E. and simultaneous D. E. by L. T.
4. Find Fourier transform, Finite - Transform, F-sine Transform and F-cosine Transform of the function.

#### Semester VI: Course outcome of Linear Algebra

Students will able to-

1. Define vector space, span, dependent and independent vectors, basis and dimension.
2. Find range space and null space of linear transformation and verify rank nullity theorem.
3. Find Eigen value and Eigen vectors of linear transformation.
4. Find orthogonal and orthonormal sets.

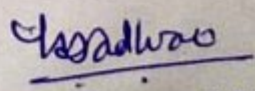
#### Semester VI: Course outcome of Graph Theory

Students will able to-

1. Describe the origin of Graph theory
2. Illustrate different types of graphs.
3. Determine degree, vertex and edges of graph.
4. Draw diagrams of different graphs.

  
Officiating Principal  
B.B.Arts,N.B.Commerce &  
B.P.Science College,Digras



  
(Prof V.D. JADHAO)



| Commerce                                 |                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Programme : Bachelor of Commerce (B.Com) |                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Sr. No.                                  | Program Outcomes                                                                                                                                                                                                                          | Programme Specific Outcomes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 1                                        | PO1. Effective Communication: Speak, read, write and listen clearly in person and through electronic media in English and in one Indian language, and make meaning of the world by connecting people, ideas, books, media and technology. | Business Economics (Micro):<br>1. To expose Students of Commerce to basic micro economic concepts and inculcate an analytical approach to the subject matter.<br><br>2. To stimulate the student interest by showing the relevance and use of various economic theories. 3. To apply economic reasoning to problems of business.                                                                                                                                                                                                                                                                    |
|                                          | PO2.Social Interaction: Elicit views of others, mediate disagreements and help reach conclusions in group settings.                                                                                                                       | Financial Accounting :<br>1. To impart the knowledge of various accounting concepts<br>2. To instill the knowledge about accounting procedures, methods and techniques.<br>3. To acquaint them with practical approach to accounts writing by using software package.                                                                                                                                                                                                                                                                                                                               |
|                                          | PO3.Effective Citizenship: Demonstrate empathetic social concern and equity centered national development, and the ability to act with an informed awareness of issues and participate in civic life through volunteering.                | Business Organization:<br>1. To provide basic knowledge & understanding about business management concept.<br>2. To provide an understanding about various functions of management.<br>1) To impart students with the knowledge of fundamentals of Company Law.<br>2) To update the knowledge of provisions of the Companies Act of 2013.<br>3) To apprise the students of new concepts involving in company law regime.<br>4) To acquaint the students with the duties and responsibilities of Key Managerial Personnel.<br>5) To impart students the provisions and procedures under company law. |
|                                          | PO4.Ethics: Recognize different value systems including your own, understand the moral dimensions of your decisions, and accept responsibility for them.                                                                                  | Business Mathematics and Statistics:(SYBCOM)<br>1. To prepare for competitive examinations<br>2. To understand the concept of Simple interest, compound interest and the concept of EMI.<br>3. To understand the concept of shares and to calculate Dividend<br>4. To understand the concept of population and sample.<br>5. To use frequency distribution to make decision.<br>6. To understand and to calculate various types of averages and variations.<br>7. To understand the concept and application of profit                                                                               |





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|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  |                                                                                                                                                                   | <p>and loss in business.</p> <p>8. To solve LPP to maximize the profit and to minimize the cost.</p> <p>9. To use correlation and regression analysis to estimate the relationship between two variables.</p> <p>10. To understand the concept and techniques of different types of index numbers.</p>                                                                                                                                                                                                      |
|  | PO5.Environment and Sustainability: Understand the issues of environmental contexts and sustainable development.                                                  | <p>Corporate Accounting:</p> <p>To enable the students to develop awareness about Corporate Accounting in conformity with the provisions of Companies Act and Accounting as per Indian Accounting Standards.</p> <ol style="list-style-type: none"> <li>1. To make aware the students about the conceptual aspect of corporate accounting</li> <li>2. To enable the students to develop skills for Computerized Accounting</li> </ol>                                                                       |
|  | PO6.Self-directed and Life-long Learning: Acquire the ability to engage in independent and life-long learning in the broadest context socio-technological changes | <p>Business Management:(FYBCOM)</p> <ol style="list-style-type: none"> <li>1. To provide basic knowledge &amp; understanding about business management concept.</li> <li>2. To provide an understanding about various functions of management.</li> </ol>                                                                                                                                                                                                                                                   |
|  |                                                                                                                                                                   | <p>Company Law :</p> <ol style="list-style-type: none"> <li>1) To impart students with the knowledge of fundamentals of Company Law.</li> <li>2) To update the knowledge of provisions of the Companies Act of 2013.</li> <li>3) To apprise the students of new concepts involving in company law regime.</li> <li>4) To acquaint the students with the duties and responsibilities of Key Managerial Personnel.</li> <li>5) To impart students the provisions and procedures under company law.</li> </ol> |
|  |                                                                                                                                                                   | <p>Cost and Management Accounting:(TYBCOM)</p> <p>To Impart The Knowledge Of:</p> <ol style="list-style-type: none"> <li>1. Basic Cost concepts.</li> <li>2. Elements of cost.</li> <li>3. Ascertainment of Material and Labour Cost.</li> </ol>                                                                                                                                                                                                                                                            |





## Courses offered

| Sr. No. | Course                                        | Course outcomes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|---------|-----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1       | FYB.Com : Financial Accounting.               | 1. imparted the knowledge of various accounting concepts<br>2. instilled the knowledge about accounting procedures, methods and techniques.<br>3. acquainted them with practical approach to accounts writing by using software package.                                                                                                                                                                                                                                                                                                               |
|         | FYB.Com : Business Economics (Micro)          | 1. exposed Students of Commerce to basic micro economic concepts and inculcate an analytical approach to the subject matter.<br>2. Stimulated the student interest by showing the relevance and use of various economic theories.<br>3. Applied economic reasoning to problems of business.                                                                                                                                                                                                                                                            |
|         | SYB.Com : Business Mathematics and Statistics | 1. prepared for competitive examinations 2. Understood the concept of Simple interest, compound interest and the concept of EMI.<br>3. Understood the concept of shares and to calculate Dividend<br>4. Understood the concept of population and sample.<br>5. used frequency distribution to make decision.<br>6. To understand and to calculate various types of averages and variations.<br>7. Understood the concept and application of profit and loss in business. 8. Understood the concept and techniques of different types of index numbers. |
|         | SYB.Com : Corporate Accounting                | Developed awareness about Corporate Accounting in conformity with the provisions of Companies Act and Accounting as per Indian Accounting Standards. 1. Made aware the students about the conceptual aspect of corporate accounting 2. To enable the students to develop skills for Computerized Accounting                                                                                                                                                                                                                                            |
|         | TYB.Com : Elements of Company Law             | 1) Imparted students with the knowledge of fundamentals of Company Law. 2) Updates the knowledge of provisions of the Companies Act of 2013. 3) Apprises new concepts involving in company law regime. 4) Acquainted the students with the duties and responsibilities of Key Managerial Personnel. 5) understands the provisions and procedures under company law.                                                                                                                                                                                    |





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|---|--------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2 | TY.B.Com :<br>Business<br>Regulatory<br>Framework<br>(Mercantile<br>Law) | 1. Gets acquainted with the basic concepts, terms & provisions of Mercantile and Business Laws. 2. Develops the awareness among the students regarding these laws affecting business, trade and commerce.                                                                                                                                                                                                                     |
|   | FY.B.Com :<br>Advanced<br>Accounting.                                    | Gets knowledge of various accounting concepts To instill the knowledge about accounting procedures, methods and techniques. acquainted with practical approach to accounts writing by using software package. T                                                                                                                                                                                                               |
|   | TYBCom :<br>Indian &<br>Global<br>Economic<br>Development                | 1) exposed to a new approach to the study of the Indian Economy. 2) Analyzes the present status of the Indian Economy. 3) understands the process of integration of the Indian Economy with other economics of the world. 4) acquainted with the emerging issues in policies of India's foreign trade.                                                                                                                        |
|   | TY.B.Com :<br>Auditing &<br>Taxation                                     | 1. acquainted about the concept and principles of Auditing, Audit process, Assurance Standards, Tax Audit, and Audit of computerized Systems. 2. gets knowledge about preparation of Audit report. 3. understands the basic concepts and acquires knowledge about Computation of Income, Submission of Income Tax Return, Advance Tax, and Tax deducted at Source, Tax Collection Authorities under the Income Tax Act, 1961. |

*Sachin*

H.O.D

Dept. of Commerce

*S. M. Kulkarni*  
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