



Janta Shikshan Prasarak Mandal's
Marutraoji Ghule Patil Art's, Commerce and Science College,
Ahmednagar

(Affiliated to Savitribai Phule Pune University, Pune)

Program Outcome /Course Outcome
2013 Pattern

INDEX	
Sr.No.	Department Name
1	<u>Bachelor of Arts</u>
2	<u>Bachelor of Commerce</u>
3	Bachelor of Science
4	<u>Bachelor of Computer Science</u>

F.Y.B.A

F.Y.B.A. (Marathi)	<p>१ मराठी या विषयाचा अभ्यास करणा-या विद्यार्थ्यास स्थूलपणे मराठी साहित्य, मराठी भाषा आणि मराठी संस्कृती यांचा क्रमशः परिचय करून दिला.</p> <p>२ साहित्यासंबंधी - विशेषतः मराठी साहित्यासंबंधी रुची निर्माण केली.</p> <p>३ विद्यार्थ्यांच्या वाङ्मयीन अभिरुचीचा विकास केला.</p> <p>४ आस्वाद घेण्याची डोळस क्षमता विकसित केली.</p> <p>५ साहित्याभ्यासातून जीवनविषयक समज विकसित केला.</p> <p>६ मराठी साहित्यातील भिन्न भिन्न प्रवाह आणि प्रकार लक्षात आणून दिले.</p> <p>७ जागतिकीकरणात विविध क्षेत्रांना सामोरे जाण्यासाठी भाषिक क्षमता विकसित केली.</p> <p>८ व्यक्तिमत्त्व विकासात भाषेचे महत्त्व स्पष्ट केली.</p>
F.Y.B.A.(Hindi)	<p>१ छात्रांको हिंदी के गद्य - पद्य के रचनाकारोंका परिचय हुआ I</p> <p>२ कहानी कवीता एकांकी साक्षात्कार रेखाचित्र आदी विधाओके माध्यम से छात्रोंका भावनात्मक विकास किया I</p> <p>३ हिंदी साहित्य के प्रति रुची बढ़ाई I</p> <p>४ राष्ट्रीय एकता सामाजिक उत्तरदायित्व आदी मूल्योंकीओर ध्यान आकर्शित किया .</p> <p>५ पारीभाषिक षब्दावली, पत्र लेखन ,अनुवाद के माध्यम से रचनात्मक पहलुओं से परिचित किया I</p> <p>६ छात्रों मे राष्ट्रभाषा हिंदी का प्रचार प्रसार किया I</p>
F.Y.B.A.(English) Com.	<p>To familiarize students with excellent pieces of prose and poetry in English so that they realize the beauty and communicative power of English</p> <p>b) To expose them to native cultural experiences and situations in order to develop humane values and social awareness</p> <p>c) To develop overall linguistic competence and communicative skills of the students</p>
F.Y.B.A.(English)	<p>To expose students to the basics of literature and language</p> <p>b) To familiarize them with different types of literature in English, the literary devices and terms so that they understand the literary merit, beauty and creative use of language</p> <p>c) To introduce the basic units of language so that they become aware of the technical aspects and their practical usage</p> <p>d) To prepare students to go for detailed study and understanding of literature and language</p> <p>e) To develop integrated view about language and literature in them</p>
F.Y.B.A.(History)	<p>To Introduce innovative study techniques in the study of History of Maratha to make it value based, conceptual and thought provocative. To introduce International elements in the study of Marathas to facilitate comparative analysis of this history. To highlight the importance of past in exploration of present context. To understand the Socio –economic, cultural and political background of 17th century Maharashtra. To increase the spirit of healthy Nationalism & Secularism among the student. To encourage student s to for competitive examinations. To promote interest in the discipline of History. Suggesting the Importance of References.</p>
F.Y.B.A.(Phycology)	<p>1. To provide solid foundation for the basic principles of psychology 2. To familiarize students with the historical trends in psychology, major concepts, theoretical perspectives, and empirical findings. 3. To provide an overview of the applications of psychology.</p>
F.Y.B.A. (Geography)	<p>i. Described what geography & Geomorphology are.</p> <p>ii. Understand the physical principles & process & characteristics of the earth surface</p> <p>lii. Understand the utility and application of Geomorphology in different regions and environment.</p> <p>iv. Understand the principles of geomorphology & the process that shape the landscape.</p> <p>v. the students making aware of the need of protection and conservation of different landforms.</p> <p>vi. Be able to use & analyze maps</p>
F.Y.B.A. (Economics)	<p>1. Introduced to students Development of Agriculture, Agricultural Productivity, Green Revolution, Organic Farming etc.</p> <p>2. Acquaint the students with the issues relating Recent Issues in Indian Agriculture, Agricultural Marketing, Agricultural Finance, Agricultural Labour,) Irrigations and Agricultural Inputs,</p> <p>3. Tried to make the students aware of WTO and Indian Agriculture.</p>

Indian Government and Politics (1167)G-1	<p>To Introduce the Students to the Indian Constitution making –Need of Constitution and importance of Preamble of Indian Constitution in this students guidelines – salient features of Indian Constitution .</p> <p>To make Students aware of the various structure there functions, compositions and importance guidance</p> <p>To identify the role of Loksabha ,Rajyasabha the making process of legislature .</p> <p>Nature of Parliamentary Government .</p> <p>Composition,Powers and Functions of Supreme and High Court .</p> <p>Political Parties in India I- National Parties</p> <p>II- Regional Parties.</p> <p>Roll of cast and Religion in Politics.</p> <p>To Provide through knowledge about Constitution is the Fundamental law of a country which details its System of governance read together its gives the understanding of the Governing philosophy of the Country .</p> <p>Sanvidhan day in the importance by the collage students</p>
History General Paper No. 1 Chh. Shivaji and His Times (1630 – 1707)	<p>To Introduce innovative study techniques in the study of History of Maratha to make it value based, conceptual and thought provocative. To introduce International elements in the study of Marathas to facilitate comparative analysis of this history. To highlight the importance of past in exploration of present context. To understand the Socio –economic, cultural and political background of 17th century Maharashtra. To increase the spirit of healthy Nationalism & Secularism among the student. To encourage student s to for competitive examinations. To promote interest in the discipline of History. Suggesting the Importance of References.</p>

S.Y.B.A	
S.Y.B.A. ((Marathi G2)	<ol style="list-style-type: none"> १ शुद्धलेखनाची ओळख करून दिली. २ पारिभाषिक संज्ञाची ओळख करून दिली. ३ चरित्र-आत्मचरित्र या साहित्यप्रकारांच्या तात्त्विक घटकांचे –ज्ञान करून दिली. ४ आधुनिक मराठी साहित्यातील निवडक चरित्र-आत्मचरित्रात्मक वेच्यांचे आकला, आस्वाद आणि मूल्यमापा करण्याची क्षमता विद्यार्थ्यांमध्ये निर्माण केली.
S.Y.B.A. ((MarathiS1)	<ol style="list-style-type: none"> १ मराठी साहित्यप्रकारांच्या तात्त्विक घटकांचे - ज्ञान दिले. २ वेगवेगळ्या कालखंडातील मराठीतील अभिजात साहित्यकृतींचा संस्कार घडविली. ३ साहित्याविषयीची अभिरुची निर्माण केली. ४ साहित्यकृतीला मुक्त प्रतिसाद देण्याची क्षमता विकसित केली. ५ साहित्यकृतीचे आकलन, आस्वाद आणि मूल्यमापा करण्याची दृष्टी निर्माण केली. ६ साहित्याचा सूक्ष्म पातळीवर अभ्यास करण्याची क्षमता विकसित केली. ७ पदव्युत्तर अभ्यास करण्याची पूर्वतयारी केली.
S.Y.B.A. ((MarathiS2)	<ol style="list-style-type: none"> १ विशेषस्तरावर अभ्यासाचा प्रारंभ होत असताना, मराठी साहित्याच्या ऐतिहासिक परंपरेचे स्थूल - ज्ञान करून दिली. २ विशिष्ट कालखंडाच्या पार्श्वभूमीवर साहित्यामागील प्रेरणा, प्रवृत्तीचे - ज्ञान करून दिली. ३ साहित्यप्रकारांच्या विकासाशील परंपरेचे स्थूल - ज्ञान करून दिली. ४ पदव्युत्तर अभ्यास करण्याची पूर्वतयारी केली.
S.Y.B.A.(Hindi G2)	<ol style="list-style-type: none"> १ छात्रांको हिंदी के गद्य - पद्य के रचनाकारोंका परीचय दिया I २ कहानी कवीता एकांकी साक्षात्कार रेखाचित्र आदी विधाओके माध्यम से छात्रोंका भावनात्मक विकास किया I ३ हिंदी साहित्य के प्रति रुची बढ़ाई I ४ राष्ट्रीय एकता सामाजिक उत्तरदायित्व आदी मूल्योंकी ओर ध्यान आकर्शित किया I ५ पत्र लेखन, अनुवाद के माध्यम से रचनात्मक पहलुओं से परीचित किया I

	६ छात्रों में राष्ट्रभाषा हिंदी का प्रचार प्रसार किया।
S.Y.B.A.(Hindi Spl.1)	१ भाषा की परीभाषा, विशेषताएँ, विविध रूपों से परिचित किया। २ हिंदी बोलीओं का परिचय दिया। ३ छात्रों में राष्ट्रभाषा हिंदी का प्रचार प्रसार किया। ४ राजभाषा हिंदी का संवैधानिक परिचय दिया। ५ भाषा विज्ञान, मुख्य और गौण अंगों का परिचय कराना लिपि की जानकारी दिया।
S.Y.B.A.(Hindi Spl.2)	१ हिंदी उपन्यास, नाटक के विविध मानदंड के आधार पर छात्रों में समीक्षण की क्षमता निर्माण किया। २ उपन्यास, नाटक के आस्वादन की क्षमता निर्माण किया। ३ मध्ययुगीन संत एवं भक्तों के काव्य से छात्रों को परिचित किया। ४ साहित्य के शिल्प एवं सौंदर्य से परिचित किया।
S. Y. B. A. Compulsory English	1. To develop competence among the students for self-learning 2. To familiarize students with excellent pieces of prose and poetry in English so that they realize the beauty and communicative power of English 3. To develop students' interest in reading literary pieces 4. To expose them to native cultural experiences and situations in order to develop humane values and social awareness 5. To develop overall linguistic competence and communicative skills of the students
S. Y. B. A. Special Paper-I (S-1)	Title of the Paper: Appreciating Drama (1) Objectives: 1. To acquaint and familiarize the students with the terminology in Drama Criticism (i.e. the terms used in Critical Analysis and Appreciation of Drama) 2. To encourage students to make a detailed study of a few sample masterpieces of English Drama from different parts of the world 3. To develop interest among the students to appreciate and analyze drama independently 4. To enhance students awareness in the aesthetics of Drama and to empower them to evaluate drama independently
S. Y. B. A Special Paper-II (S-2) (w. e. f- 2014-2015)	Title of the Paper: Appreciating Poetry (1) Objectives: 1. To acquaint and familiarize the students with the terminology in poetry criticism (i.e. the terms used in critical analysis and appreciation of poems) 2. To encourage students to make a detailed study of a few sample masterpieces of English poetry 3. To enhance students awareness in the aesthetics of poetry and to empower them to read, appreciate and critically evaluate the poetry independently
S.Y.B.A. Modern Banking G2	1. Introduced to Evolution of Modern Banking, the awareness among the students of Modern Banking System. 2. Banking constituted important components towards understanding of economics. 3. Clear understanding of the operations of banking their interaction with the rest of the economy is essential to realize how monetary forces operate through a multitude of channels- market, non-market, institutions and among others, the state.
S.Y.B.A Micro Economics S1	1. Tried to make the students aware of The Basic Micro- Economic Problems of Scarcity and Choice. 2. Introduced to the students Classification of Markets, Theory of Distribution and Welfare Economics etc. 3. Familiarized the students with the various aspects of the Theory of Consumer Choice.

S.Y.B.A Macro Economics S2	<ol style="list-style-type: none"> 1. The aggregate analysis has assumed such a great significance in recent times that a prior understand of macroeconomic theoretical structure is considered essential for the proper comprehension of the different issues and policies. 2. Familiarized the students with the functioning of the economy as a whole, including how the economy's total output of goods and services and employment of resources is determined and what causes these totals to fluctuate. 3. Macroeconomics or aggregative economics analyses and established the functional relationship between the large aggregates.
Gg- 210- Geography of Disaster Management (G-2)	<ul style="list-style-type: none"> • Described what geographic condition & Disaster management • Understand the concept of disaster & its relation with Geography. • Understand the utility & application of hazards in different areas & its management. • Making the need of protection & disaster management.
Gg- 220- Tourism Geography (S-1)	<ol style="list-style-type: none"> i. Understand basic concepts of Geography & Tourism. ii. Understand the students with the utility and application of Tourism. iii. Help the students & society to understand the interrelationship between Tourism and employment generation opportunities. iv. Understand the impact of tourism on Physical and Human Environments.
Gg- 201- FUNDAMENTALS OF GEOGRAPHICAL ANALYSIS (S-2)	<ol style="list-style-type: none"> i students use various Projections and Cartographic Techniques ii. Understand basic of Statistical data and diagrams. iii. Understand with the principles of surveying, its importance and utility in the geographical study.
Political Theory and Concepts. (2167) G-2	<ol style="list-style-type: none"> 1. The Content of this course designed with following objectives . 2. To introduce the Students to the structure of Political theory nature and scope . 3. To make students aware the various elements of the State .(Types of Liberty), Socialist approach of Democracy. 4. The impact of globalization in the field of Social Politics and Economic . To identify the roll of Indian Democracy in the main concepts for Exa- Nationalism ,Liberty,Equality Justice ,Rights ,Power,Sovernity .
S.Y.B.A. G-2:- Social Psychology	<ol style="list-style-type: none"> 1. Acquaint Students with basic concepts, theories and applications of Social psychology 2. Familiarize students with group behaviour 3. Underline the importance of Close Relationships and Pro- social behaviour
Modern- India (1857-1950) S.Y.B.A. (History) General Paper 2	The course is designed to help the student to know- History of freedom movement of India, aims, objectives problems and progress of Independent India. It aims at enabling the student to understand the processes of rise of modern India. The Course attempts to acquaint student with fundamental aspects of Modern Indian History. To explain the basic concepts/ concerns/ frame work of Indian History
History - Special Paper - I, Ancient India (3000 B.C. to 1206 AD)	To Survey the sources of History of Ancient India. The Course intends to provide an Understanding of the social, economic, religious and institutional bases of Ancient India. The course will study such as agriculture, Industry, trade. To study the development of the concept of Nation- State background of political history. To study ancient Indian Art & Architecture.
(History, special Paper -II) From 2014-2015 History of Modern Maharashtra (1818 to 1960)	The purpose of the course is to enable the students to study the history of modern Maharashtra .To highlight the ideas, institutions, forces and movements that contributes to the modern Maharashtra. To acquaint the students with various interpretative perspectives. To introduce the student

	to the regional history within a broad national framework.
HISTORY OF THE WORLD IN 20TH CENTURY (1914 CENTURY (1914 CENTURY (1914-1992) – G3	1. To help the student to know Modern World. To acquaint the student with the Socio-economic & Political developments in other countries. And understand the contemporary world in the light of its background History. 2. To orient the students with political history of Modern World. 3. To acquaint Students about the main developments in the Contemporary World (To understand to important development in 20th century World.) 4. Impart knowledge about world concepts. 5. To enable students to understand the economic transition in World during the 20th Century. 6. Become aware of the principles, forces, processes and problems of the recent times. 7. To acquaint the students with growth of various political movements that shaped the modern world. 8. To highlight the rise and growth of nationalism as a movement in different parts of the world.
INTRODUCTION TO HISTORY INTRODUCTION TO HISTORY LEVEL: S3	1. To orient students about how history is studied, written and understood. 2. To explain methods and tools of data collection 3. To understand the meaning of Evolution of Historiography. 4. To study the Various Views of Historiography. 5. To study the approaches to Historiography. 6. To study the types of Indian Historiography. 7. To describe importance of inter-disciplinary research. 8. To introduce students to the basics of research. 9. To acquaint the student with the recent research in History. 10. Learn how to use sources in their presentation
HISTORY OF ASIA IN 20TH CENTURY (1914 CENTURY (1914 CENTURY (1914 –1992) – S4	1. To orient the students with political history of Asia. 2. To enable students to understand the economic transition in Asia during 20th Centuries. 3. Understand the important developments in the 20th century Asia in a Thematic approach. 4. To provide students with an overall view and broad perspective different movements connected with Nationalist aspirations in the region of Asia in general. 5. To empower students to cope with the challenges of globalization.

T.Y.B.A.

TY.B.A.(Hindi) G3	<ol style="list-style-type: none"> छात्रों को हिंदी के गद्य - पद्य के रचनाकारों का परिचय दिया। कहानी कविता एकांकी साक्षात्कार रेखाचित्र आदी विधाओं के माध्यम से छात्रों का भावनात्मक विकास किया। हिंदी साहित्य के प्रति रुची बढ़ाई। राष्ट्रीय एकता सामाजिक उत्तरदायित्व आदी मूल्यों की ओर ध्यान आकर्षित किया। पत्र लेखन, अनुवाद के माध्यम से रचनात्मक पहलुओं से परिचित किया। छात्रों में राष्ट्रभाषा हिंदी का प्रचार प्रसार किया। कार्यक्रम संयोजन कौशल का परिचय, संक्षिप्त लेखन, समाचार पत्र और रेडियो के लिए वार्ता लेखन अवगत किया।
T.Y.B.A.(Hindi) Spl.3	<ol style="list-style-type: none"> हिंदी साहित्य के इतिहास की लेखन परंपरा से अवगत किया। साहित्य के कालखंडों के नामकरण एवं पृष्ठभूमि का परिचय दिया। छात्रों को हिंदी के गद्य - पद्य के रचना कारों का परिचय दिया। साहित्य का विकासक्रम, साहित्य और युग जीवन का संबंध विशद किया। आधुनिक युग की सामाजिक, राजनीतिक, धार्मिक साहित्यिक तथा आर्थिक परीक्षितियों के बदलाव के परिपेक्ष्य में हिंदी साहित्य में आए बदलावों से परिचित किया।
T.Y.B.A.(Hindi) Spl.4	<ol style="list-style-type: none"> छात्रों को काव्य, साहित्य की परिभाषाएं, काव्यहेतु, प्रयोजन का ज्ञान किया। रेखाचित्र आदी विधाओं के माध्यम से काव्य के तत्व, षट्पदी का ज्ञान कराने कहानी कविता एकांकी साक्षात्कार छात्रों का भावनात्मक विकास किया रेखाचित्र आदी विधाओं के माध्यम से रस का परिचय दिया। रेखाचित्र आदी विधाओं के माध्यम से आलोचना स्वरूप, उपयोगिता से परिचित किया।
T.Y.B.A Economic Development & Planning- G3	<ol style="list-style-type: none"> The Study of Economic Development has gained importance because of sustained interest of the developing countries in uplifting their economic conditions by restructuring their economics to acquire greater diversity, efficiency and equity in Consonance with their priorities. Acquaint the students with the issues In recent times, besides hard core

	economic prescriptions to development, concern hitherto relegated to background, like education, health, sanitation and infrastructural development, have found place of pride in explaining the preference of various economies incorporated in this paper are devoted to the theories of economic development, approaches to economic development, social and institutional aspects of development, constraints on development process, macro economic policies, roll of foreign capital and economic planning etc. in developing countries.
T.Y.B.A International Economics s-3	<ol style="list-style-type: none"> 1. The students would also be well trained about the rationale of recent changes in the export import policies of India. 2. Discuss with policy point of view under the present waves of globalization and liberalization both in the North and in the South. 3. Introduced to student Theories of International Trade.
T.Y.B.A Public Finance -S4	<ol style="list-style-type: none"> 1. Acquaint the students budgetary policy is an important part to understand the basic problems of use of resources, distribution of Income, etc. 2. Discuss with vast array of fiscal institutions -tax systems, expenditure programs budgetary procedures, stabilization instruments, debt issues, levels of government, etc., 3. Require political processes for their solution in a manner which combines individual freedom and justice.
Political Ideology (3167)	<ol style="list-style-type: none"> 1. This Paper Studies the roll of different political ideologies and there impact In politics . 2. Each ideology is critically studied in its historical context . 3. In course stream and suitable nugnces within each ideology . 4. The changes andcontinuities in its doctrine and its relevance to contemporary times are highlighted.
T.Y.B.A.(Compulsory English)	<ol style="list-style-type: none"> 1. Attempted to introduce students to the best uses of language in literature. 2. Attempted to familiarize students with the communicative power of English 3. Attempted to enable students to become competent users of English in real life situations 4. Attempted to expose students to varied cultural experiences through literature 5. Attempted to contribute to their overall personality development by improving their communicative and soft skills
T. Y. B. A. General English (G-3)	<p>Title of the Paper: Advanced Study of English Language and Literature</p> <ol style="list-style-type: none"> a) Attempted to expose students to some of the best samples of Indian English Poetry b) Attempted to make the students see how Indian English poetry expresses the ethos and culture of India c) Attempted to make them understand creative uses of language in Indian English Poetry d) Introduced students to some advanced areas of language study e) Attempted to prepare students to go for detailed study and understanding of literature and language f) Developed integrated view about language and literature among the students
T.Y.B.A. Special Paper III (S-3)	<p>Title of the Paper: Appreciating Novel</p> <ol style="list-style-type: none"> a) Introduced students to the basics of novel as a literary form b) Exposed students to the historical development and nature of novel c) Attempted to make students aware of different types and aspects of novel d) Developed literary sensibility and sense of cultural diversity in students e) To expose students to some of the best examples of novel
T.Y.B.A. Special Paper IV	<p>Title of the Paper: Introduction to Literary Criticism</p> <ol style="list-style-type: none"> a) Introduced students to the basics of literary criticism b) Attempted to make them aware of the nature and historical development of criticism c) Attempted to make them familiar with the significant critical approaches and

	<p>terms</p> <p>d) Attempted to encourage students to interpret literary works in the light of the critical approaches</p> <p>e) Developed aptitude for critical analysis</p>
Gg-310- Human Geography (G-3)	<p>1.Understand Population dynamics & migration.</p> <p>2.Understand political systems ,states,territory& borders</p> <p>3.Understand the basic elements of culture</p> <p>4. Understand physical features & it's relationship of human activities</p>
Gg. 320: Population and Settlement Geography (S-3)	<p>i.Understanding of spatial and structural dimensions of population.</p> <p>ii. Understand with global and regional distribution of population & equips them for comprehending the Indian situation.</p> <p>iii.Understand with the spatial and structural Characteristics of human settlement under varied environment conditions.</p> <p>iv.Understand Urban & rural structure & development</p>
Gg.301:Techniques of Spatial Analysis (S-4)	<p>i. Understand SOI Toposheets ,Aerial Photographs & Satellite Image to acquired the knowledge physical & cultural features.</p> <p>ii. Maked students train to handle these statistics towards analyzing the geographical problems.</p>
G3 INDUSTRIAL AND ORGANIZATIONAL PSYCHOLOGY OR APPLIED PSYCHOLOGY	<p>1- The emergence of Industrial and Organizational Psychology</p> <p>2- 2- The work done in Industrial and Organizational Psychology</p> <p>3- 3- The significance of training, performance appraisal, leadership models</p> <p>4- 4- The importance of Engineering Psychology</p>
TYBA (Marathi) G3	<p>१ आधुनिक मराठी साहित्यातील विविध साहित्यप्रकारांचा परिचय वाढविला त्यांचे . आकलन करून दिला. साहित्याबद्दलची अभिरुची विकसित करून कलाकृतींचा आस्वाद घेण्याची क्षमता वाढविली.</p> <p>२ नेमलेल्या कलाकृतींच्या संदर्भात साहित्य परंपरेचा स्थूल परिचय करून घेतला.</p> <p>३ भाषेचे यथोचित आकलन करण्याची व वापर करण्याची यथायोग्य क्षमता विकसित केली.</p> <p>४ 'निबंध' व 'प्रवासवर्णन' या साहित्य प्रकारांचे तात्त्विक आकलन केले.</p> <p>५ विद्यार्थ्यांची वाचन व लेखन क्षमता विकसित करून त्यांना ग्रंथपरीक्षणाची आवड निर्माण केली .</p>
TYBA (Marathi) S3	<p>१ साहित्याचे स्वरूप समजावून घेतले.</p> <p>२ साहित्याची प्रयोजने समजावून घेतली.</p> <p>३ साहित्यनिर्मितीची प्रक्रिया समजावून घेतली.</p> <p>४ साहित्याची भाषा समजावून घेतली.</p> <p>५ साहित्याची आस्वादप्रक्रिया समजावून घेतली.</p> <p>६ साहित्यिक अभिरुची समजावून घेतली.</p> <p>७ साहित्य आणि समाज यातील परस्पर संबंध समजावून घेतले.</p> <p>८ साहित्यप्रकाराची संकल्पना समजावून घेतली.</p> <p>९ वाङ् मयीन.मूल्ये समजावून घेतली.</p>
TYBA (Marathi) S4	<p>१ भाषेचे स्वरूप व कार्य, भाषेच्या अभ्यासाचे महत्त्व, भाषेच्या अभ्यासाची प्रमुख अंगे जाणून घेतले.</p> <p>२ भाषा म्हणजे काय व तिचे मानवी जीवनातील कार्य व महत्त्व जाणून घेतले .</p> <p>३ वेगवेगळ्या भाषा अभ्यासपद्धतींचे वेगळेपण व महत्त्व जाणून घेतले.</p> <p>४ स्वनिर्मितीची प्रक्रिया समजावून घेतली.</p> <p>५ वागिंद्रियांची रचना व कार्य समजावून घेतली.</p> <p>६ स्वन विज्ञान, स्वनिम संकल्पना आणि मराठीची स्वनिम व्यवस्था जाणून घेतली.</p> <p>७ मराठीची रूपिम व्यवस्था समजावून घेतली.</p> <p>८ वाक्यविन्यास व अर्थविन्यास या भाषा वैज्ञानिक संकल्पनांचा मराठीच्या संदर्भात स्थूल परिचय करून घेतला.</p> <p>९ ऐतिहासिक भाषाभ्यास पद्धतीचे स्वरूप व महत्त्व लक्षात घेतले.</p> <p>१० भाषाकुलाची संकल्पना जाणून घेवून मराठी भाषेच्या उत्पत्तीचा अभ्यास करणे.</p> <p>११ मराठी भाषेचा उत्पत्ती काळ जाणून घेवून तत्कालीन भाषिक स्थित्यंतरांचा आढावा घेतला.</p> <p>१२ टप्पाटप्प्याने भाषा म्हणून मराठीच्या वाटचालीचा ऐतिहासिक आढावा घेतला.</p>

F.Y. B.Com.

Class	Sr. No	Sub Name/ Courses name	Outcomes
F.Y.B.Com	1	Subject Name : Compulsory English Course Code -: 101	a) offered students good pieces of prose and poetry so that they realize the beauty and communicative power of English b) exposed them to native cultural experiences and situations so that they understand the importance and utility of English language c) developed linguistic competence and communicative skills among the students d) developed oral and written communicative skills among the students so that their employability enhances and English becomes the medium of their livelihood and personality
	2	Compulsory Paper Subject Name : Financial Accounting Course Code -: 102	1. imparted the knowledge of various accounting concepts 2. Instilled the knowledge about accounting procedures, methods and techniques. 3.Acquainted them with practical approach to accounts writing by using software package.
	3	Compulsory Paper Subject Name : Business Economics Micro) Course Code -: 103	1. exposeed Students of Commerce to basic micro economic concepts and inculcate an analytical approach to the subject matter. 2. stimulateed the student interest by showing the relevance and use of various economic theories. 3.applied economic reasoning to problems of business.
	4	Optional Paper Subject Name : Business Mathematics and Statistics Course Code -: 104 (A)	1. prepared for competitive examinations 2. Introduced the concept of Simple interest, compound interest and the concept of EMI. 3. Introduced the concept of shares and to calculate Dividend 4. .Introduced the concept of population and sample. 5. used frequency distribution to make decision. 6. Introduced and to calculate various types of averages and variations. 7. Introduced the concept and application of profit and loss in business. 8. Introduced how to solve LPP to maximize the profit and to minimize the cost.

	5	Optional Paper Subject Name : Computer Fundamentals Course Code -: 104 (B)	<ol style="list-style-type: none"> 1. Acquainted students familiar with Computer environment. 2. Tried to make the students familiar with the basics of Operating System and business communication tools. 3. Tried to make the students familiar with basics of Network, Internet and related concepts. 4. Tried to make awareness among students about applications of Internet in Commerce. 5. Tried to enable students to develop their own web site.
	6	Optional Paper Subject Name : Banking and Finance [Fundamentals of Banking] Course Code -: 105 – b.	<ol style="list-style-type: none"> 1. Acquainted the students with the fundamentals of banking. 2. Developed the capability of students for knowing banking concepts and operations. 3. Tried to make the students aware of banking business and practices. 4. To give thorough knowledge of banking operations. 5. Tried to enlighten the students regarding the new concepts introduced in the banking system.
	7	Optional Paper Subject Name -: Marketing and Salesmanship [Fundamentals of Marketing] Course Code -: 106 – c.	<ol style="list-style-type: none"> 1) General Objective of the Paper. <ol style="list-style-type: none"> a) Tried to create awareness about market and marketing. b) Tried to establish link between commerce/Business and marketing. 2) Core Objectives of the paper. <ol style="list-style-type: none"> a) Acquainted the basic concept of marketing. b) Acquainted marketing philosophy and generating ideas for marketing research. c) created awareness to know the relevance of marketing in modern competitive world. d) developed an analytical ability to plan for various marketing strategy
	8	Subject Name : Marathi	<p>१ वाणिज्य विषयाच्या विद्यार्थ्यांना मराठीच्या व्यवहारक्षेत्राची माहिती दिली. विविध क्षेत्रातील भाषा व्यवहाराचे स्वरूप व गरज समजावून दिली.</p> <p>२ या व्यवहार क्षेत्रातील मराठी भाषेचे स्थान स्पष्ट करणे व त्यातील मराठीच्या प्रत्यक्षापराचा अभ्यास केली.</p> <p>३ विविध क्षेत्रातील मराठीचा अभ्यास करण्यासाठी प्रसारमाध्यमाचे स्वरूप व त्यातील भाषण व्यवहार समजावून दिली.</p> <p>४ प्रसारमाध्यमातील विविध लेखन प्रकारांचा अभ्यास व प्रत्यक्ष लेखन केले.</p>

S.Y. B.Com.

Class	Sr. No	Sub Name/ Courses name	Outcomes
S.Y.B.Com	1	Compulsory Paper Subject Name -: Business Communication. Course Code -: 201.	1. Tried to make them understand the concept, process and importance of communication. 2. Tried to make them develop awareness regarding new trends in business communication. 3. Tried to provide knowledge of various media of communication. 4. Tried to make them develop business communication skills through the application and exercises.
	2	Compulsory Paper Subject Name -: Corporate Accounting Course Code -: 202	Tried to make enable the students to develop awareness about Corporate Accounting in conformity with the provisions of Companies Act and Accounting as per Indian Accounting Standards. 1. Tried to make them aware the students about the conceptual aspect of corporate accounting 2. Tried to make them enable the students to develop skills for Computerized Accounting 3. Tried to make them enable the students to develop skills about accounting standards
	3	Compulsory Paper Subject Name -: Business Economics (Macro) Course Code -: 203	1. The objective of the course is to familiarize the students the basic concept of Macro Economics and application. 2. Tried to make them Study the behavior of the economy as a whole. 3. Tried to make them Study the relationship among broad aggregates. 4. Tried to make them apply economic reasoning to problems of the economy.
	4	Compulsory Paper Subject Name -: Business Management Course Code -: 204	1. Provided basic knowledge & understanding about business management concept. 2. Provided an understanding about various functions of management.
	5	Compulsory Paper Subject Name -: Elements of Company Law. Course Code -: 205	1) tried to impart students with the knowledge of fundamentals of Company Law. 2) Tried to update the knowledge of provisions of the Companies Act of 2013. 3) Tried to apprise the students of new concepts involving in company law regime. 4) triedTo acquaint the students with the duties and responsibilities of Key

			Managerial Personnel. 5) Tried To impart students the provisions and procedures under company law.
	6	Banking & Finance Special Paper I Subject Name -: Indian Banking System - I Course Code -: 206 – B.	1.tried create the awareness among the students of Indian banking system. 2.tried to enables students to understand the reforms and other developments in the Indian Banking 3. provided students insight into the functions and role of Reserve Bank of India.
	7	Marketing Management Special Paper I Subject Name -: Marketing Management. Course Code -: 206 – H.	<ul style="list-style-type: none"> • tried to orient the students recent trends in marketing management • tried to create awareness about marketing of ecofriendly products in the society through students • Tried to inculcate knowledge of various aspects of marketing management through practical approach • Tried to acquaint the students with the use of E-Commerce in competitive environment • helped the students understand the influences of marketing management on consumer behavior

T.Y.B.Com

Class	Sr. No	Sub Name/ Courses name	Outcomes
T.Y.B.Com	1	Compulsory Paper Subject Name -: Business Regulatory Framework (Mercantile Law) Course Code -: 301.	1. acquainted students with the basic concepts, terms & provisions of Mercantile and Business Laws 2. tried to develop the awareness among the students regarding these laws affecting business, trade and commerce
	2	Compulsory Paper Subject Name -: Advanced Accounting. Course Code -: 302	1 tried to impart the knowledge of various accounting concepts . 2 tried to instill the knowledge about accounting procedures, methods and techniques. 3 tried to acquaint them with practical approach to accounts writing by using software package. TE
	3	Compulsory Paper Subject Name -: Indian & Global Economic Development Course Code -: 303 (A)	1) Tried to expose students to a new approach to the study of the Indian Economy. 2) Helped the students in analyzing the present status of the Indian Economy. 3) Tried to enable students to understand the process of integration of the Indian Economy with other economics of the world. 4) Tried to acquaint students with the emerging issues in policies of India's foreign trade.
	4	Compulsory Paper Subject Name -: Auditing & Taxation Course Code -: 304	The Study of Various Components of this course will enable the students: 1. Acquainted themselves about the concept and principles of Auditing, Audit process, Assurance Standards, Tax Audit, and Audit of computerized Systems. 2. Tried to get knowledge about preparation of Audit report. 3. Make them understand the basic concepts and to acquire knowledge about Computation of Income, Submission of Income Tax Return, Advance Tax, and Tax deducted at Source, Tax Collection Authorities under the Income Tax Act, 1961.
	5	Banking & Finance Special Paper II Subject Name -: Financial Markets and Institutions in India. Course Code -: 305 – b.	1. Tried to acquaint the students with Financial Markets and its various segments. 2. Tried give the students and understanding of the operations and developments in financial markets in India. 3. Tried enable them to gain an insight into the functioning and role of financial institutions in the Indian Economy.
	6	Marketing Management Special Paper II Subject Name -: Marketing Management. Course Code -: 305 – h.	1 Tried to make them understand the concept and functioning of marketing planning and sales management 2 tried to make them know marketing strategies and organization 3 informed various facets of marketing with regulatory aspects 4 Tried to make them understand marketing in

			globalize scenario
	7	Banking & Finance Special Paper III Subject Name -: Banking Law and Practices in India. Course Code -: 306 – b.	1. acquainted the students with Banking Law and Practice in relation to the Banking system in India 2. Tried to Make them understand the legal aspects of Banking transactions and its implications as Banker and Customer. 3. tried to make the Students aware of the Banking Law and Practice in India
	8	Marketing Management Special Paper III Subject Name -: Marketing Management. Course Code -: 306 – h	1. Tried to make them know detailing of Marketing Research 2. Tried to make them understand the role Brand and Distribution Management in marketing 3. Tried to inform about Marketing and Economic Development 4. tried to make them Know of the importance of control on marketing activities

F.Y.B.Sc.

Class	Sr.no	Sub Name/Course Name	Outcomes
F.Y.B.Sc	1	Subject Name : Algebra and Geometry Course code: : MT101	1) the students take a sufficient knowledge of fundamental principles, methods and a clear perception of innumerable power of mathematical ideas and tools and know how to use them by modeling, solving and interpreting. 2) Reflecting the broad nature of the subject and developing mathematical tools for continuing further study in various fields of science. 3) A student take be able to recall basic facts about mathematics and should be able to display knowledge of conventions such as notations, terminology and recognize basic geometrical figures and graphical displays, state important facts resulting from their studies. 4) A student takes relational understanding of mathematical concepts and concerned structures, and should be able to follow the patterns involved, mathematical reasoning.
	2	Subject Name: Calculus and Differential equations CourseCode: MT102	1) A student know the of history of mathematics and hence of its past present and future role as part of our culture. 2) students develop a positive attitude towards mathematics as an interesting and valuable subject of study. 3) student prepare the mathematical models related to basic mathematics.
1	F.Y.B.Sc	PhyI PH:111 Mechanics ----- PH112 Heat and Thermodynamics	On successful completion of this course students will be able to do the following: 1. Demonstrate an understanding of Newton's laws and applying them in calculations of the motion of simple systems. 2. Use the free body diagrams to analyse the forces on the object. 3. Understand the concepts of energy, work, power, the concepts of conservation of energy and be able to perform calculations using them. 4. Understand the concepts of elasticity and be able to perform calculations using them. 5. Understand the concepts of surface tension and viscosity and be able to perform calculations using them. 6. Use of Bernoulli's theorem in real life problems. 7. Demonstrate quantitative problem solving skills in all the topics covered. ----- After successfully completing this course, the student will be able to do the following: 1. Describe the properties of and relationships between the thermodynamic properties of a pure substance. 2. Describe the ideal gas equation and its limitations. 3. Describe the real

			<p>gas equation. 4. Apply the laws of thermodynamics to formulate the relations necessary to analyze a thermodynamic process. 5. Analyse the heat engines and calculate thermal efficiency. 6. Analyze the refrigerators, heat pumps and calculate coefficient of performance. 7. Understand property 'entropy' and derive some thermodynamical relations using entropy concept. 8. Understand the types of thermometers and their use.</p> <p>.</p>
	FyBSc	<p>Phy II PH 121 Physics Principles</p> <hr/> <p>PH 122 Electrostatics</p>	<p>On successful completion of this course students will be able to do the following: 1. To demonstrate an understanding of electromagnetic waves and its spectrum. 2. Understand the types and sources of electromagnetic waves and applications. 3. To understand the general structure of atom, spectrum of hydrogen atom. 4. To understand the atomic excitation and LASER principles. 5. To understand the bonding mechanism in molecules and rotational and vibrational energy levels of diatomic molecules. 6. To demonstrate quantitative problem solving skills in all the topics covered</p> <p>-----</p> <p>On successful completion of this course students will be able to do the following: 1. Demonstrate an understanding of the electric force, field and potential, and related concepts, for stationary charges. 2. Calculate electrostatic field and potential of simple charge distributions using Coulomb's law and Gauss's law. 3. Demonstrate an understanding of the dielectric and effect on dielectric due to electric field. 4. Demonstrate an understanding of the magnetic field for steady currents using Biot-Savart and Ampere's laws. 5. Demonstrate an understanding of magnetization of materials. 6. Demonstrate quantitative problem solving skills in all the topics covered.</p>
	F.Y. B. Sc	Zoology Paper I (ZY-101) Animal Systematics and Diversity I and II	<p>1. To study one invertebrate type animal, e.g. earthworm Learning outcome: Learners will get an idea of general characteristics and details of invertebrate animal systems.</p> <p>2. To provide thorough knowledge about various animal sciences from primitive to highly evolved animal groups</p> <p>3. To introduce basic concepts of invertebrate classification in animal kingdom from phylum protozoa to annelida. To study general characteristics and salient features of animals.</p> <p>4. Learners will get an idea of higher groups of invertebrate animal life and their classification.</p>

			5. To inculcates interest and foundation for further studies in Zoology
	F.Y. B. Sc	Zoology Paper II(ZY-102) Fundamentals of Cell Biology and Genetics	<ol style="list-style-type: none"> 1. Students will be able to apply biological theories and concepts to novel problems in genetics, evolution, and systematic. 2. Students come to know the fundamental features of prokaryotic and eukaryotic cells and methods used to examine them. 3. They understood structure, composition and role of cell and cell organelles. 4. They understood various concept like Mendelian inheritance, Gene Interaction, Multiple Alleles and Sex-determination 5. Student get familiar with scientific and technical knowledge of genetics, evolution, and systematics on human society and the environment.
	F.Y. B.Sc. Sem I & II	Physical & Inorganic Chemistry	<ol style="list-style-type: none"> 1)Understanding of behavior of gases, ideal gas as a model system and its extension to real gases. The dependence of physical state on pressure, volume and temperature is being realized. 2) Existence of liquid state, comparison of its properties with other states is to be perceived. Liquid crystal are essentials in all common and research devices and instruments hence they are introduced briefly. 3) Theoretical basis of adsorption phenomena is integrated. Understanding dynamic nature of surface and its applications in catalysis and in dispersed phases will lead to new area of nanoscience. 4) Mathematical background required for derivations, depictions and problem solving. This chapter strengthens these aspects.

		Organic & Inorganic Chemistry	<p>1. Understanding fundamental concepts which govern the structure, bonding, properties and reactivities of organic molecules such as covalent character, hybridization, bond angles, bond energies, bond polarities and shapes of molecules.</p> <p>2) Application of Huckel's rule to different organic compounds to find out aromatic /non aromatic characters.</p> <p>3) Concept of isomerism, types of isomers and representation of organic molecules.</p> <p>4).Conformational isomerism in alkanes with energy profile diagram.</p> <p>5) Concept of geometrical isomerism with E/Z nomenclature. 6) Understanding of optical activity, isomer number, tetrahedral carbon atom, concept of chirality, enantiomerism, R/S nomenclature for single chiral centre.</p>
F.Y Bsc (Sem-I)	1	Paper –I (Plant Diversity)	<ol style="list-style-type: none"> 1. Study basic concept of Evolution of diversity of plants. 2. Study bysystematics and phylogeny of cryptogams and phanerogams. 3. Conservation of plants diversity focusing on plants conservation. 4. Discuss natural and managed ecosystem at local, regional, and global levels.
	2	Paper-II (Industrial Botany)	<ol style="list-style-type: none"> 1. Introduce various types of nursery's in our students. 2. Knowledge of industry in their future business. 3. Methods of cultivation of Mushrooms. 4. In Floriculture industry.
(Sem-II)	3	Paper –I (Plant Morphology and plant Anatomy)	<ol style="list-style-type: none"> 1. Discuss the types of Inflorescence with example. 2. Describe modification of root and stems. 3. Study anatomical and histological structure of vegetative and reproductive plant organ. 4. Isolate phytoconstituents from plant extract and spectral and other methods.
	4	Paper—II (Indutrial botany)	<ol style="list-style-type: none"> 1. Development of world class human resources for the relevant research institute. 2. Importance of plants in Biofuel industry and its isolation. 3. Preparation of bio fertilizer and bio pesticide in industry from plants. 4. Types of fruit processing and their preservation technique.

	F.Y. B.Sc. Sem I & II	Physical & Inorganic Chemistry	<p>1) Understanding of behavior of gases, ideal gas as a model system and its extension to real gases. The dependence of physical state on pressure, volume and temperature is being realized.</p> <p>2) Existence of liquid state, comparison of its properties with other states is to be perceived. Liquid crystal are essentials in all common and research devices and instruments hence they are introduced briefly.</p> <p>3) Theoretical basis of adsorption phenomena is integrated. Understanding dynamic nature of surface and its applications in catalysis and in dispersed phases will lead to new area of nanoscience.</p> <p>4) Mathematical background required for derivations, depictions and problem solving. This chapter strengthens these aspects.</p>
		Organic & Inorganic Chemistry	<p>1. Understanding fundamental concepts which govern the structure, bonding, properties and reactivities of organic molecules such as covalent character, hybridization, bond angles, bond energies, bond polarities and shapes of molecules.</p> <p>2) Application of Huckel's rule to different organic compounds to find out aromatic /non aromatic characters.</p> <p>3) Concept of isomerism, types of isomers and representation of organic molecules.</p> <p>4). Conformational isomerism in alkanes with energy profile diagram.</p> <p>5) Concept of geometrical isomerism with E/Z nomenclature. 6)</p> <p>Understanding of optical activity, isomer number, tetrahedral carbon atom, concept of chirality, enantiomerism, R/S nomenclature for single chiral centre.</p>
	F.Y. B.Sc. Sem I & II	Physical & Inorganic Chemistry	<p>1) Understanding of behavior of gases, ideal gas as a model system and its extension to real gases. The dependence of physical state on pressure, volume and temperature is being realized.</p> <p>2) Existence of liquid state, comparison of its properties with other states is to be perceived. Liquid crystal are essentials in all common and research devices and instruments hence they are introduced briefly.</p> <p>3) Theoretical basis of adsorption phenomena is integrated. Understanding dynamic nature of surface and its applications in catalysis and in dispersed phases will lead to new area of nanoscience.</p> <p>4) Mathematical background required for derivations, depictions and problem solving. This chapter strengthens these aspects.</p>

		Organic & Inorganic Chemistry	<p>1. Understanding fundamental concepts which govern the structure, bonding, properties and reactivities of organic molecules such as covalent character, hybridization, bond angles, bond energies, bond polarities and shapes of molecules.</p> <p>2) Application of Huckel's rule to different organic compounds to find out aromatic /non aromatic characters.</p> <p>3) Concept of isomerism, types of isomers and representation of organic molecules.</p> <p>4).Conformational isomerism in alkanes with energy profile diagram.</p> <p>5) Concept of geometrical isomerism with E/Z nomenclature. 6) Understanding of optical activity, isomer number, tetrahedral carbon atom, concept of chirality, enantiomerism, R/S nomenclature for single chiral centre.</p>
	F.Y . BSC	Physical chemistry	<p>After studying this chapter, students should be able to</p> <p>1) Solve the problems based on differentiation of a function with power, addition subtraction, logarithmic function etc.</p> <p>2) addition subtraction, logarithmic function etc.</p> <p>3) addition subtraction, logarithmic function etc.</p> <p>4) addition subtraction, logarithmic function etc.</p> <p>5) Define compressibility factor 'Z' and Boyle temp.</p>

S.Y.B.Sc.			
Class	Sr.no	Sub Name/Course Name	Outcomes
S.Y.B.Sc	1	Subject Name : Multivariable Calculus I Course code: : MT 211	<p>1)the students takes a sufficient knowledge of fundamental principles ,methods and a clear perception of innumerous power of mathematical ideas and tools and know how to use them by modeling ,solving and interpreting.</p> <p>2) Reflecting the broad nature of the subject and developing mathematical tools for continuing further study in various fields of science.</p> <p>3) A student take be able to recall basic facts about mathematics and should be able to display knowledge of conventions such as notations, terminology and recognize basic geometrical figures and graphical displays ,state important facts resulting from their studies.</p> <p>4) A student takes relational understanding of mathematical concepts and concerned structures, and should be able to follow the patterns involved, mathematical reasoning.</p>
Sem -1	2	Subject Name: Laplace Transform and Fourier Series CourseCode:MT212(B)	<p>1) A student know the of history of mathematics and hence of its pastpresent and future role as part of our culture.</p> <p>2) students develop a positive attitude towards mathematics as aninteresting and valuable subject of study.</p> <p>3)student prepare the mathematical models related to basic mathematics.</p>
Sem -2		Subject Name: Linear Algebra Course Code: MT 221	<p>1) A students apply their skills and knowledge ,that is, translate information presented verbally into mathematical form, select and use appropriate mathematical formulae or techniques in order to process the information and draw the relevant conclusion.</p> <p>2) A student takes relational understanding of mathematical concepts and concerned structures, and should be able to follow the patterns involved, mathematical reasoning.</p> <p>3)the students takes a sufficient knowledge of fundamental principles ,methods and a clear perception of innumerous power of mathematical ideas and tools and know how to use them by modeling ,solving and interpreting</p>

		<p>Subject Name: Multivariable Calculus II Course Code: MT222(A)</p>	<p>1) Students Solve the mathematical problem by using appropriate mathematical formulae or techniques.</p> <p>2) students enhanced overall development and to equip them with mathematical modeling abilities, problem solving skills, creative talent and power of communication.</p> <p>3) students acquired knowledge of basic mathematics</p>
	SyBSc	<p>Phy I PH211 MMP</p> <p>-----</p> <p>PH212 Waves and Oscillation</p>	<p>After the completion of this course students will be able to Understand the complex algebra useful in physics courses •Understand the concept of partial differentiation. •Understand the role of partial differential equations in physics •Understand vector algebra useful in mathematics and physics .Understand the singular points of differential equation.</p> <p>-----</p> <p>Understand the physics and mathematics of oscillations. •Solve the equations of motion for simple harmonic, damped, and forced oscillators. •Formulate these equations and understand their physical content in a variety of applications, •Describe oscillatory motion with graphs and equations, and use these descriptions to solve problems of oscillatory motion.</p> <p>•Explain oscillation in terms of energy exchange, giving various examples.</p> <p>•Solve problems relating to undamped, damped and forced oscillators and superposition of oscillations. •Understand the mathematical description of travelling and standing waves.</p> <p>•Recognise the one-dimensional classical wave equation and solutions to it. •Calculate the phase velocity of a travelling wave.</p> <p>•Explain the Doppler effect, and predict in qualitative terms the frequency change that will occur for a stationary and a moving observer. •Define the decibel scale qualitatively, and give examples of sounds at various levels. •Explain in qualitative terms how frequency, amplitude, and wave shape affect the pitch, intensity, and quality of tones produced by musical instruments</p>
		<p>Phy II PH 221 Electronics</p> <p>-----</p> <p>PH222 Optics</p>	<p>Apply laws of electrical circuits to different circuits. •Understand the relations in electricity •Understand the properties and working of transistors. •Understand the functions of operational amplifiers .Design circuits using transistors and operational amplifiers. •Understand the Boolean algebra and logic circuits.</p> <p>Learning Outcomes</p> <p>-----</p> <p>This course will enable you to: acquire the basic concepts of wave optics •describe how light can constructively and destructively interfere •explain why a light beam spreads out after passing through an aperture •summarize the polarization characteristics of</p>

			<p>electromagnetic waves •appreciate the operation of many modern optical devices that utilize wave optics •Understand optical phenomena such as polarisation, birefringence, interference and diffraction in terms of the wave model. •analyse simple examples of interference and diffraction phenomena. •be familiar with a range of equipment used in modern optics.</p>
	S.Y. B. Sc	Zoology Paper I (ZY-211): Animal Systematics and Diversity -III and IV	<ol style="list-style-type: none"> 1. To equipped the students with skills related to laboratory as well as field based studies 2. To make the students aware about conservation and sustainable use of biodiversity 3. We produce graduates with the ability to become autonomous learners equipped cope with higher degree studies 4. A successful student in this course should be able to Understand the diversity and evolutionary relationships among animals 5. The Student get knowledge of the basic structure and function of different groups of invertebrates and vertebrates
	S.Y. B. Sc	Zoology Paper II(ZY-212): Applied Zoology I and II	<ol style="list-style-type: none"> 1. To make the students aware of applications of Zoology subject in various industries To highlight the potential of various branches to become an entrepreneur 2. To address the socio-economical challenges related to animal sciences 3. Student gets broad, relevant and contemporary curriculum, enriched by the scholarly activity and skill. 4. It provide opportunities for practical work practical skills in laboratory-based and field zoology.and experiential learning in aspects of Applied Zoology

S.Y.B. Sc. Sem I	Physical & Analytical chemistry	<p>1) Student should learn Concept of kinetics, terms used, rate laws, types of order. Discuss examples of first order and second order reaction. Pseudo molecular reactions. Factors affecting rate of reaction. Techniques of measurement of rate of reaction.</p> <p>2). Understand difference between thermal and photochemical reactions.</p> <p>3) Student should learn Classification of errors.</p> <p>4) Student should learn Basic principles in qualitative analysis. ii. Meaning of common ion effect. iii. Role of common ion effect and solubility product.</p> <p>5) Classification of compounds with different functional groups. ii. Different tests for detection of elements like C, H, (O), N, S & P. iii. Characteristic tests for different functional groups. iv. Different colour tests and the reactions. v. Quantitative analysis of C, H by Liebig's method.</p>
S.Y.B. Sc. Sem I	Organic & Inorganic Chemistry	<ul style="list-style-type: none"> i) Identify chiral center in the given organic compounds. ii) Define Erythro, threo, meso, diastereoisomers with suitable examples. 2) differentiate between properties. 2) differentiate between properties of pig iron and wrought iron. Definition of corrosion. ii) Types of corrosion of pig iron and wrought iron. Definition of corrosion. ii) Types of corrosion. 3) explain the term 3) explain the term pyrometallurgy and to explain the physico-chemical principles involved in the reduction process by carbon monoxide. pyrometallurgy and to explain the physico-chemical principles involved in the 4) To know physico-chemical principles involved in electrometallurgy. reduction process by carbon monoxide) To know physico-chemical principles involved in electrometallurgy.
S.Y.B. Sc. Sem II	Physical & Analytical chemistry	<p>1) Free energy concepts, types and its variation. 2). Free energy. 2). Free energy change for chemical reaction and physical transition change for chemical reaction and physical transition change for chemical reaction and physical. 3) chemical reaction and physical transition change for chemical reaction and physical transition. Meaning of equivalent weight, molecular weight, normality, molality, primary and secondary standards. physical transition change for chemical reaction and physical transition. Meaning of equivalent weight, molecular weight, normality, molality, primary and secondary standards. 4) Explain role of indicators. 5) Estimate copper from CuSO_4 and available chlorine in bleaching powder.</p>

	S.Y.B. Sc. Sem II	Organic & Inorganic Chemistry	1`)Student Known different biomolecules 2)Know the phenomenon of mutaroatation.3) know position of d-block elements in periodic table. ii) To know the general electronic configuration & electronic configuration of elements.
			4) Student learned define acids and bases according to Arrhenius theory Lowery- Bronsted concept, Lewis concept5
			5)Student learned know toxic chemical in the environment.
			6) Understand M-C bond and to define organometallic compounds

S.Y Bsc- (Sem-I)	1	Paper – I (Taxonomy of Angiosperms and Plant Community)	<ol style="list-style-type: none"> 1. Classify organism into taxonomy on the basis of phenotype and gametophyte. 2. Assign the each taxon name. 3. Study of factors of evolution to find origin of species. 4. Describe taxa and phytography.
	2	Paper—II (Plant Physiology) BO-212	<ol style="list-style-type: none"> 1. Study of How plants Function. 2. Understand Biological and chemical process of individual plants cell. 3. Interaction of plant cell, Tissue and Organ. 4. Study how plants control or regulate identical functional.
S.Y Bsc (Sem-II)	3	Paper –I (Plant anatomy and Embryology) BO-221	<ol style="list-style-type: none"> 1. Study internal structure of plants. 2. Internal cell organization and arrangements of plants. 3. Study Embryo and their development. 4. Development of Male and Female gametophyte.
	4	Paper –II (Plant Biotechnology)	<ol style="list-style-type: none"> 1. Develop a model to introduce and to study expression of genes related to water deficit tolerance. 2. Apply biotechnology to the development of company strategies with incidence of florets tress. 3. Develop public awareness and professional certification on plants biotechnology.
	S.Y.B. Sc. Sem I	Physical & Analytical chemistry	<p>1) Student should learned Concept of kinetics , terms used , rate laws , types of order Discuss examples of first order and second order reaction Pseudo molecular reactions Factors affecting on rate of reaction Techniques of measurement of rate of reaction</p> <p>2). Understand difference between thermal and photochemical reactions</p> <p>3) Student should learned Classification of errors</p> <p>4) Student should learned Basic principles in qualitative analysis ii. Meaning of common ion effect iii. Role of common ion effect and solubility product</p> <p>5) Classification of compounds with different functional groups ii. Different tests for detection of elements like C, H, (O), N, S & P. iii. Characteristic tests for different functional groups iv. Different colour tests and the reactions v. Quantitative analysis of C, H by Liebig's method</p>

	S.Y.B. Sc. Sem I	Organic & Inorganic Chemistry	<p>i) Identify chiral center in the given organic compounds. ii) Define Erythro, threo, meso, diastereoisomers with suitable examples. 2) differentiate between properties of pig iron and wrought iron. Definition of corrosion. ii) Types of corrosion of pig iron and wrought iron. Definition of corrosion. ii) Types of corrosion. 3) explain the term pyrometallurgy and to explain the physico chemical principles involved in the reduction process by carbon monoxide. pyrometallurgy and to explain the physico chemical principles involved in the 4) To know physico-chemical principles involved in electrometallurgy. reduction process by carbon monoxide) To know physico-chemical principles involved in electrometallurgy.</p>
	S.Y.B. Sc. Sem II	Physical & Analytical chemistry	<ul style="list-style-type: none"> 1) Free energy concepts, types and its variation 2). Free energy change for chemical reaction and physical transition change for chemical reaction and physical transition change for chemical reaction and physical transition change for chemical reaction and physical transition. Meaning of equivalent weight, molecular weight, normality, molality, primary and secondary standards physical transition change for chemical reaction and physical transition. Meaning of equivalent weight, molecular weight, normality, molality, primary and secondary standards. 4) Explain role of indicators. 5 Estimate copper from CuSO_4 and available chlorine in bleaching powder.
	S.Y.B. Sc. Sem II	Organic & Inorganic Chemistry	<p>1) Student Known different biomolecules 2) Know the phenomenon of mutarotation. 3) know position of d-block elements in periodic table. ii) To know the general electronic configuration & electronic configuration of elements.</p>
			<p>4) Student learned define acids and bases according to Arrhenius theory Lowery- Bronsted concept, Lewis concept 5)</p>

			5) Student learned know toxic chemical in the environment.
			6) Understand M-C bond and to define organometallic compounds
	S.Y.B. Sc. Sem I	Physical & Analytical chemistry	<p>1) Student should learned Concept of kinetics , terms used , rate laws , types of order Discuss examples of first order and second order reaction Pseudo molecular reactions Factors affecting on rate of reaction Techniques of measurement of rate of reaction</p> <p>2). Understand difference between thermal and photochemical reactions</p> <p>3) Student should learned Classification of errors</p> <p>4) Student should learned Basic principles in qualitative analysis ii. Meaning of common ion effect iii. Role of common ion effect and solubility product</p> <p>5) Classification of compounds with different functional groups ii. Different tests for detection of elements like C, H, (O), N, S & P. iii. Characteristic tests for different functional groups iv. Different colour tests and the reactions v. Quantitative analysis of C, H by Liebig's method</p>
	S.Y.B. Sc. Sem I	Organic & Inorganic Chemistry	<ul style="list-style-type: none"> i) Identify chiral center in the given organic compounds. ii) Define Erythro, threo, meso, diastereoisomers with suitable examples. 2) differentiate between properties .2) differentiate between properties of pig iron and wrought iron Definition of corrosion. ii) Types of corrosion of pig iron and wrought iron Definition of corrosion. ii) Types of corrosion. 3) explain the term 3) explain the term pyrometallurgy and to explain the physico chemical principles involved in the reduction process by carbon monoxide. pyrometallurgy and to explain the physico chemical principles involved in the 4) To know physico-chemical principles involved in electrometallurgy. reduction process by carbon

			monoxide)To know physico-chemical principles involved in electrometallurgy.
	S.Y.B. Sc. Sem II	Physical & Analytical chemistry	1)Free energy concepts, types and its variation 2). Free energy 2). Free energy change for chemical reaction and physical transition change for chemical reaction and physical transition change for chemical reaction and physical 3) chemical reaction and physical transition change for chemical reaction and physical transition. Meaning of equivalent weight, molecular weight, normality, molality, primary and secondary standards physical transition change for chemical reaction and physical transition. Meaning of equivalent weight, molecular weight, normality, molality, primary and secondary standards.4) Explain role of indicators.5 Estimate copper from CuSO ₄ and available chlorine in bleaching powder.
	S.Y.B. Sc. Sem II	Organic & Inorganic Chemistry	1`)Student Known different biomolecules 2)Know the phenomenon of mutarotation.3) know position of d-block elements in periodic table. ii) To know the general electronic configuration & electronic configuration of elements.
			4) Student learned define acids and bases according to Arrhenius theory Lowery- Bronsted concept, Lewis concept5)

			5) Student learned know toxic chemical in the environment.
			6) Understand M-C bond and to define organometallic compounds
	S.Y.Bsc	Organic Inorganic Chemistry	1) To know different reactions in the blast furnace. 2) To differentiate between properties of pig iron and wrought iron. 3) To differentiate between ore and minerals. 4) To differentiate between calcination and roasting and smelting.

T.Y. B.Sc. (Mathematics) SEM-III

Class	Sr.no	Sub Name/Course Name	Outcomes
T.Y.B.Sc	1	Subject Name : Metric Spaces Course code: MT 331	1)the students takes a sufficient knowledge of fundamental principles ,methods and a clear perception of innumerable power of mathematical ideas and tools and know how to use them by modeling ,solving and interpreting. 2) Reflecting the broad nature of the subject and developing mathematical tools for continuing further study in various fields of science. 3) A student take be able to recall basic facts about mathematics and should be able to display knowledge of conventions such as notations, terminology and recognize basic geometrical figures and graphical displays ,state important facts resulting from their studies.
Sem-3	2	Subject Name: Real Analysis-I Course Code: MT 332	1) A student know the of history of mathematics and hence of its pastpresent and future role as part of our culture. 2) students develop a positive attitude towards mathematics as aninteresting and valuable subject of study. 3)student prepare the mathematical models related to basic mathematics.

	3	<p>Subject Name : Problem Course on MT 331 and MT 332</p> <p>Coursre Code: MT 333</p>	<p>1) A students apply their skills and knowledge ,that is, translateinformation presented verbally into mathematical form, select and use appropriate mathematical formulae or techniques in order to process the information and draw the relevant conclusion.</p> <p>2) A student know the of history of mathematics and hence of its pastpresent and future role as part of our culture.</p> <p>3)the students takes a sufficient knowledge of fundamental principles ,methods and a clear perception of innumerous power of mathematical ideas and tools and know how to use them by modeling ,solving and interpreting</p>
	4	<p>Subject Name :Group Theory</p> <p>Coursre Code: MT 334</p>	<p>1) A student know the of history of mathematics and hence of its pastpresent and future role as part of our culture.</p> <p>2) Reflecting the broad nature of the subject and developing mathematical tools for continuing further study in various fields of science.</p>

	5	<p>Subject Name : Ordinary Differential Equations</p> <p>Cousre Code: MT 335</p>	<p>1)the students takes a sufficient knowledge of fundamental principles ,methods and a clear perception of innumerous power of mathematical ideas and tools and know how to use them by modeling ,solving and interpreting.</p> <p>2) Reflecting the broad nature of the subject and developing mathematical tools for continuing further study in various fields of science.</p>
	6	<p>Subject Name : Problem Course on MT 334 and MT 334</p> <p>Cousre Code: MT 336</p>	<p>1) Reflecting the broad nature of the subject and developing mathematical tools for continuing further study in various fields of science.</p>
	7	<p>Subject Name : Operations Research</p> <p>Cousre Code: MT 337:A</p>	<p>1) A student know the of history of mathematics and hence of its pastpresent and future role as part of our culture.</p>

	8	Subject Name : Number Theory Course Code: MT:337:F	1)student prepare the mathematical models related to basic mathematics.
T.Y.B.Sc	1	Subject Name : Complex Analysis Course code: MT 341	1)the students takes a sufficient knowledge of fundamental principles ,methods and a clear perception of innumerous power of mathematical ideas and tools and know how to use them by modeling ,solving and interpreting. 2) Reflecting the broad nature of the subject and developing mathematical tools for continuing further study in various fields of science. 3) A student take be able to recall basic facts about mathematics and should be able to display knowledge of conventions such as notations, terminology and recognize basic geometrical figures and graphical displays ,state important facts resulting from their studies. .
Sem-4	2	Subject Name: Real Analysis-II Course Code: MT 342	1) A student know the of history of mathematics and hence of its pastpresent and future role as part of our culture. 2) students develop a positive attitude towards mathematics as aninteresting and valuable subject of study. 3)student prepare the mathematical models related to basic mathematics.

	3	<p>Subject Name : Problem Course on MT 341 and MT 342</p> <p>Course Code: MT 343</p>	<p>1) A students apply their skills and knowledge ,that is, translate information presented verbally into mathematical form, select and use appropriate mathematical formulae or techniques in order to process the information and draw the relevant conclusion.</p> <p>2) A student know the of history of mathematics and hence of its past present and future role as part of our culture.</p> <p>3) the students takes a sufficient knowledge of fundamental principles ,methods and a clear perception of innumerable power of mathematical ideas and tools and know how to use them by modeling ,solving and interpreting</p>
	4	<p>Subject Name : Ring Theory</p> <p>Course Code: MT 344</p>	<p>1) A student know the of history of mathematics and hence of its past present and future role as part of our culture.</p> <p>2) Reflecting the broad nature of the subject and developing mathematical tools for continuing further study in various fields of science.</p>

	5	<p>Subject Name: Partial Differential Equations</p> <p>Course Code : MT 345</p>	<p>1)the students takes a sufficient knowledge of fundamental principles ,methods and a clear perception of innumerous power of mathematical ideas and tools and know how to use them by modeling ,solving and interpreting.</p> <p>2) Reflecting the broad nature of the subject and developing mathematical tools for continuing further study in various fields of science.</p>
	6	<p>Subject Name: Problem Course on MT 344 and MT 345</p> <p>Course Code: MT 346</p>	<p>1) Reflecting the broad nature of the subject and developing mathematical tools for continuing further study in various fields of science.</p>
	7	<p>Subject Name: Graph theory</p> <p>Course Code: MT 347: D</p>	<p>1) Reflecting the broad nature of the subject and developing mathematical tools for continuing further study in various fields of science</p>

	8	<p>Subject Name: Computational Geometry</p> <p>Course Code: MT 347:F</p>	<p>2) students develop a positive attitude towards mathematics as an interesting and valuable subject of study.</p> <p>3) student prepare the mathematical models related to basic mathematics.</p>
1	TyBSc	PH-331: Mathematical Methods in Physics II	<p>After the completion of this course students will be able to Understand the complex algebra useful in physics courses</p> <ul style="list-style-type: none"> • Understand the concept of partial differentiation. • Understand the role of partial differential equations in physics • Understand vector algebra useful in mathematics
2		PH 332 Solid State Physics	<p>After the completion of this course students will be able to Understand the basic concepts of solid state matter. As well as they can find out miller indices. Students get acquainted with x ray diffraction.</p>
3		PH 333 Classical Mechanics	<p>Have a deep understanding of Newton's laws,</p> <ul style="list-style-type: none"> • Be able to solve the Newton equations for simple configurations using various methods,
4		PH 334 Atomic and Molecular Physics	<p>On successful completion of this course students will be able to study atoms as an isolated system of electrons and an atomic nucleus. It is primarily concerned with the arrangement of electrons around the nucleus and the processes by which these arrangements change. This comprises ions, neutral atoms and, unless otherwise stated, it</p>

			can be assumed that the term <i>atom</i> includes ions.
5		PH 335 Computational Physics	After the completion of this course students will be able to Understand the basic concepts of C programming. As well as they can find out solutions to complicated equations using C program. Computer graphics can be studied using this programming.
6		PH 336 B Elements of Materials Science	Students who completed this course should •Have a basic understanding of the Standard Model and of theoretical methods employed in material physics, • Be familiar with main theoretical concepts and experimental techniques used in material physics, • Be able to understand various forms and compositions inside the material.
7		PH341 Classical Electrodynamics	Students who completed this course should •Have a deep understanding of the theoretical foundations of electromagnetic phenomena, •Be able to solve the Maxwell equations for simple configurations, •Have a working knowledge of special relativity
8		PH342 Quantum Mechanics	Students who completed this course should •Have a deep understanding of the mathematical foundations of quantum mechanics, •Be able to solve the Schrödinger equation for simple configurations, •Understand the effect of symmetries in quantum
9		PH343 Thermodynamics and Statistical Physics	Students who have completed this course should •Have a deep understanding of physical statistics and its relation to information theory, •Be able to solve statistical mechanics problems for simple non-interacting systems, •Have a basic understanding of the phase transitions, •Be able to use linear response theory and kinetic equation approach
10		PH344 Nuclear Physics	Students who have completed this course should •Have a phenomenological understanding of strong interactions starting from QCD, •Be familiar with many-body physics, •Be able to make quantitative estimates for nuclear phenomena in relation to the underlying microscopic theory.
11		PH345 Electronics	Understand the properties and working of transistors. •Understand the functions of operational amplifiers .Design circuits using transistors and operational amplifiers. •
12		PH346 K Lasers	On successful completion of this course students will be able to study the characteristics of LASERs. Their types and applications in various fields of science.
T.Y Bsc.	1	Paper I (Plant Physiology and	1)It was very important to know the functions of a living

(Sem-II)		Biochemistry) Course code – BO.341	organisms or any of its parts. 2)The main objective of this course was to understand how plant live and functions. 3) To demonstrate knowledge and understanding as the molecular machinery of living cell. 4)Studied basic princiles and basic mechanisms of metabolic control and molecular signaling.
	2	Paper II (Plant Ecology and Biodiversity) Course code – BO.342	1)Knowledge about the interaction between biotic and abiotic factor of environment. 2)Adaptations of plant in different types of environmental conditions 3)To understand the nature of environmental influences on individual organisms, their populations and communities on Ecoscapes 4)The interrelationship between organisms in population and communities.
	3	Paper II (Plant Pathology) course code – BO.343	1)To studied the diseases or disorders caused by biotic and abiotic agent 2)To studied mechanisms of diseases development by pathogens. 3)Studied of interactions between plant and pathogen in relation to the overall environment. 4)Developed suitable management strategies for managing the diseases and losses caused by them.
	4	Paper IV (Medicinal and Economic Botany) Course code – BO.344	1)It was important for pharmaceuticals. 2)It was important in Ayurveda. 3)In Economic to identify evaluated the economic important of medicinal plants. 4)Studied of relationship between people and plants.
	5	Paper V(Plant biotechnology) Course code – BO.345	1)To studied of applicatuion of science and technology to plants. 2)Improvement of varieties according to relevant agronomic features. 3)Natural diversity exploitation and biodiversity protection 4)Knowledge about biofactories.
	6	Paper VI (Plant breeding and Seed Technology) Course code – BO.346	1)The prime aim of plant breeding was to improved the characteristics of plant. 2)To improved the seed varieties,seed qualities etc. 3)To improved the plant varieties . 4)To studied the hybridization technique.
TYBSc Inorganic Chemistry	1	Semester-III, Course: Inorganic Chemistry (CH-332) Chapter - 1	1)attempted to make students to know the theories of covalent bond formation 2)attempted to make students Know the assumptions and limitations of VBT 3)attempted to make students Understand the need of concept of MOT

			<p>4) attempted to make students Know LCAO principal and its approximation</p> <p>5) attempted to make students Understand and show the formation of bonding and antibonding MO's</p> <p>6) attempted to make students Draw the shapes of s, p, d orbital</p> <p>7) attempted to make students Draw combinations of s-s, s-p, p-p and d-d orbital to form σ and π molecular orbitals.</p>
	2	Semester-III, Course: Inorganic Chemistry (CH-332) Chapter - 2	<p>1) attempted to make students Know the meaning of various terms involved in coordination chemistry.</p> <p>2) attempted to make students Know the different types of Ligands.</p> <p>3) attempted to make students Understand the chelating agents, chelate and stability of chelates and complexes.</p> <p>4) attempted to make students Calculate the charge on complex ion and the oxidation number.</p> <p>5) attempted to make students Be able to give the IUPAC name the co-ordination compound.</p> <p>6) attempted to make students Know the application of co- ordination compounds in biology and chemistry.</p> <p>7) attempted to make students Be able to understand the Werner's formulation of complexes and identify the ionizable ions.</p> <p>8) attempted to make students Be able to distinguish between ionizable and non-ionizable valencies with suitable examples.</p> <p>9) attempted to make students Give the suitable physical and chemical test for identification of number and types of ionizable ions.</p> <p>10) attempted to make students Be able to draw the geometrical and optical isomerism of complexes.</p> <p>11) attempted to make students Choose the correct geometry for complexes with C.N. 4 and C.N. 6 with the help of stereoisomerism.</p> <p>12) attempted to make students Be able to define and explain isomerism in complexes.</p> <p>13) attempted to make students Be able to explain various types of isomerism.</p> <p>14) attempted to make students Comment on the stereoisomerism in complexes with C.N. 4 and C. N. 6.</p> <p>15) attempted to make students Define EAN rule and calculate EAN value of the complexes.</p> <p>16) attempted to make students Comment on EAN value and stability of complexes.</p>

		<p>17) attempted to make students Know the merits and the demerits of Sidgwick's theory.</p> <p>18) attempted to make students Be able to explain the need of concept of hybridization.</p> <p>19) attempted to make students Explain the VB representation of tetrahedral, square planar, trigonalbipyramidal and octahedral complexes.</p> <p>20) attempted to make students Be able to identify which d-orbitals are involved in hybridization during formation of complexes with different geometries such as tetrahedral, square planar, trigonalbipyramidal and octahedral.</p> <p>21) attempted to make students Be able to explain structure and magnetic behaviour of the complexes.</p> <p>22) attempted to make students Be able to identify the high spin and low spin complexes.</p> <p>23) attempted to make students Be able to identify inner orbital and outer orbital complexes.</p> <p>24) attempted to make students Explain elctroneutrality principle and different types of pi bonding.</p> <p>25) attempted to make students Know the limitations of VBT.</p> <p>26) attempted to make students Know the shapes of d-orbitals and degeneracy of d-orbitals.</p> <p>27) attempted to make students Know the assumptions of CFT.</p> <p>28) attempted to make students Understand how splitting of d-orbitals occurs when ligand approaches.</p> <p>29) attempted to make students Be able to draw crystal filled splitting diagrams of d orbital of metal ion in octahedral, tetrahedral, square planer of tetragonal ligand field.</p> <p>30) attempted to make students Interpret the spectra of complexes and calculate the 10 Dq.</p> <p>31) attempted to make students Understand the factors affecting magnitude of 10 Dq.</p> <p>32) attempted to make students Be able to find high spin and low spin complexes when 10 Dq and pairing energy are given.</p> <p>33) attempted to make students Be able to explain d-d transitions and colour of the complexes.</p> <p>34) attempted to make students Know the conditions under which Jahn-Teller distortion occurs.</p> <p>35) attempted to make students Explain, why Jahn-Teller</p>
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			<p>distortion should occur in Oh complexes?</p> <p>36) attempted to make students Be able to explain Nephelauxetic effect towards covalent bonding.</p> <p>37) attempted to make students Explain MOT of Octahedral complexes with sigma bonding.</p> <p>38) attempted to make students Be able to explain Charge Transfer Spectra.</p> <p>39) attempted to make students Be able to compare the different approaches to bonding in Coordination compounds.</p>
	3	Semester-IV, Course: Inorganic Chemistry (CH-342) Chapter - 1	<p>1) introduced to students The meaning of term f-block elements, Inner transition elements, lanthanides, actinides.</p> <p>2) introduced to students Electronic configuration of lanthanides and actinides.</p> <p>3) introduced to students Oxidation states of lanthanides and actinides and common oxidation states.</p> <p>4) introduced to students Separation lanthanides by modern methods.</p> <p>5) introduced to students Lanthanide contraction and effects of lanthanide contraction on post-lanthanides.</p> <p>6) introduced to students Use of lanthanide elements in different industries.</p> <p>7) introduced to students about Transuranic elements.</p> <p>8) introduced to students about Preparation methods of transuranic elements.</p> <p>9) introduced to students about Nuclear fuels and their applications.</p> <p>10) introduced to students about transuranic elements are called as the synthetic elements?</p> <p>11) introduced to students about IUPAC nomenclature for super heavy elements with atomic no. 100 onwards.</p>
	4	Semester-IV, Course: Inorganic Chemistry (CH-342) Chapter - 2	<p>a. introduced to students about The meaning of metal & semiconductor.</p> <p>b. introduced to students about The difference between metal, semiconductor and insulator.</p> <p>c. introduced to students about Metallic bond on the basis of band theory.</p> <p>d. introduced to students about The energy band and energy curve.</p> <p>e. introduced to students about Draw $n(E)$ & $N(E)$ curves.</p> <p>f. introduced to students about Explain the electrical conductivity of metals with respect to valence electrons.</p>

			<p>g. introduced to students about Explain the effect of temperature and impurity on conductivity of metals and semiconductors.</p> <p>h. introduced to students about Intrinsic and extrinsic semiconductor.</p> <p>i. introduced to students about The term valance band and conduction band.</p> <p>j. introduced to students about n and p type of semiconductors.</p> <p>k. introduced to students about Non-stoichiometry and semi conductivity.</p> <p>l. introduced to students about Insulators on the basis of band theory.</p> <p>m. introduced to students about The difference between Na, Mg, and Al in terms of valence electrons and conductivity.</p> <p>n. introduced to students about Meaning of super conductors and their structure.</p> <p>o. introduced to students about Discovery and applications of superconductors.</p>
	5	Semester-IV, Course: Inorganic Chemistry (CH-342) Chapter - 3	<p>i. introduced to students about Know the nature of solids.</p> <p>ii. introduced to students about Know the crystal structures of solids.</p> <p>iii. introduced to students about Draw the simple cubic, BCC and FCC structures.</p> <p>iv. introduced to students about Identify the C.N. of an ion in ionic solid.</p> <p>v. introduced to students about Identify the type of void.</p> <p>vi. introduced to students about Know the effect of radius ratio in determining the crystal structure.</p> <p>vii. introduced to students about Be able to define Pauling's univalent radius and crystal radius.</p>
	6	Semester-IV, Course: Inorganic Chemistry (CH-342) Chapter - 4	<p>i. introduced to students about Define the homogeneous catalysis.</p> <p>ii. introduced to students about Give examples of homogeneous catalysts.</p> <p>iii. introduced to students about Understand the essential properties of homogeneous catalysts-Give the catalytic reactions for Wilkinson's Catalysis, Zeigler Natta Catalysis, Monsanto acetic acid synthesis</p> <p>iv. introduced to students about Give the brief account of homogeneous catalysis.</p>

	7	Semester-IV, Course: Inorganic Chemistry (CH-342) Chapter - 5	<ul style="list-style-type: none"> i. introduced to students about Define the heterogeneous catalyst and heterogeneous catalysis. ii. introduced to students about Give examples of heterogeneous catalysts. iii. introduced to students about Understand the essential properties of heterogeneous catalysts. iv. introduced to students about Give the catalytic reactions for oxidation, reduction and cyclization processes. v. introduced to students about Give the brief account of biodiesel synthesis using heterogeneous catalysis. vi. Enlist the catalysts used for benzimidazole synthesis.
	8	Semester-IV, Course: Inorganic Chemistry (CH-342) Chapter - 6	<ul style="list-style-type: none"> i. introduced to students about Identify the biological role of inorganic ions & compounds. ii. introduced to students about Know the abundance of elements in living system and earth crust. iii. introduced to students about the classification of metals as enzymatic and non-enzymatic. iv. introduced to students about Understand the role of metals in non-enzymatic processes. v. introduced to students about the metalloproteins of iron. vi. introduced to students about the functions of hemoglobin and myoglobin in O₂ transport and storage. vii. introduced to students about Understand the toxicity of CN- and CO binding to Hb. viii. introduced to students about Draw the structure of Vit.B₁₂ and give its metabolism.
TYBSc Agriculture Chemistry	1	Semester-III Course: Agriculture Chemistry (CH-336E)	<p>Learning Objectives of Agriculture Chemistry,</p> <ul style="list-style-type: none"> 1. Attempted to make them to Know the role of agriculture chemistry and its potential 2. Attempted to Understand them basic concept of soil, properties of soil & its classification on the basis of pH 3. Attempted to make them to Know the different plant nutrients, Their functions and deficiency symptoms 4. Attempted to make them to Understand importance of manures as compared to chemical fertilizers' 5. Attempted to make them to Understand the importance of green manuring 6. Attempted to make them to the knowledge of the use of proper the plants 7. Attempted to make them to Know various techniques to protect the plants 8. Attempted to make them to Have the knowledge of various pesticides, insecticides, fungicides and herbicides 9. Attempted to make them to Identify the problematic

			<p>soil and recommend method for their reclamation</p> <p>10. Attempted to make them to Have the knowledge of quality irrigation water, water quality standard and analysis of irrigation water</p>
	2	Semester-IV Course: Dairy Chemistry (CH-336E)	<p>1. Attempted to make them to Know importance of the subject from the point of rural economy.</p> <p>2. Attempted to make them to Know the composition of milk, its food & nutritive value</p> <p>3. Attempted to make them to Understand the Microbiology of the milk</p> <p>4. Attempted to make them to Understand various preservation and adulterants, various milk proteins and their role for the human body.</p> <p>5. Attempted to make them to Know various milk products, their composition, manufacture and uses.</p>
TYBSc Analytical Chemistry			<ol style="list-style-type: none"> 1. Principles of common ion effect and solubility product. Formation of complex ion. Factors affecting on solubility of precipitation. Phenomenon of super saturation and precipitation formation. Meaning of co-precipitation and post precipitation. Choice of liquid for washing the precipitate. Precautions during filtration, drying and ignition of precipitate. Conceptual understanding of electrogravimetric principle. 2. Methods of thermo gravimetric analysis. Principles of TGA and DTA. Types of TGA. Relation between TGA and DTA. Thermal equation of TGA. Different factors affecting TGA curve. Determination of calcium oxalate precursor 8. Applications of TGA, DTA and DSC. 3. Principles of Spectrophotometric analysis and properties of electromagnetic radiations. Different Terms like absorbance, transmittance, and molar absorptivity. Mathematical Statement and derivation of Lambert's Law and Beer's Law. Different wavelength selectors and their importance. Instrumentation and working of single and double beam spectrophotometer. Additivity Principle. Different methods of color comparators. Applications 4. Voltammetry and polarography as an analytical tool. Construction, working, advantages and disadvantages of DME. Different terms involved

			<p>in Ilkovic equation. Determination of Zn and Cd from the mixture. Significance of the different terms involved. Need of removal of dissolved oxygen from analyte solution</p> <ol style="list-style-type: none"> Atomic absorption spectroscopy as an analytical tool. Measurement of absorbance of atoms by AAS. Interferences in atomic absorption spectroscopy. Applications and numerical problems. Emission spectroscopy as an analytical tool. Measurement of emission of atomic species. Different methods of analysis. Application and numerical problems. Principles of solvent extraction. Difference between KD and D. Various types of techniques of solvent extraction such as- (a) extraction (b) continuous extraction (c) counter current extraction. Difference between batch and multiple extraction. Advantages and applications of solvent extraction. To solve the numerical problems. Principle of chromatographic methods. Relation between theoretical plates and column efficiency. Technique and applications of- Column Chromatography. Technique and applications of- Thin layer Chromatography. Technique and applications of- Paper Chromatography Principle of GSC and GLC analysis. Separation mechanism involved in GSC and GLC. Instrumentation- stationary phases, column types, detectors. Working of gas chromatographic apparatus. Chromatogram and use in qualitative-quantitative analysis. Applications of gas chromatography Need of liquid chromatography. Separation mechanism involved in adsorption and partition HPLC. Instrumentation and working of HPLC. Applications of HPLC. Advantages of supercritical fluid chromatography
T.Y Bsc (Sem –I)	1	Paper –I (Cryptogamic Botany) course code – BO.331	<ol style="list-style-type: none"> Studied Non flowering plants on the earth. Studied life cycle pattern of the nonflowering plants. Studied phylogenetic relationship of gametophytic and sporophyte generation. Studied characters of all cryptogamic plants.

	2	Paper –II(Cell and Molecular biology) course code – BO.332	<ol style="list-style-type: none"> 1. Studied structure of cell and cell organelles. 2. How cell communicate to each other. 3. Studied nucleic acids (DNA AND RNA) 4. Explain the molecular mechanism behind different modes of gene regulations.
	3	Paper-III (Genetics and Evolution) course code – BO.333	<ol style="list-style-type: none"> 1. Studied heredity and variation. 2. Studied all basic gene level concept 3. Studied fossilization. 4. Find out each gene sequence, mutational changes.
	4	Paper –IV (Spermatophytic and Paleobotany) course code – BO.334	<ol style="list-style-type: none"> 1. Studied flowering plants and their structure and arrangements. 2. Studied which plants in which family included. 3. Find out Ancestor of plants. 4. Studied fossil form of plants.
	5	Paper-V(Horticulture and Floriculture) course code – BO.335	<ol style="list-style-type: none"> 1. How to cultivate plants and their requirements. 2. Studied artificial and natural propagation as well as marketing value. 3. Knowledge about the floral arrangement and technique of vase life. 4. Industrial value of flower like soap industries ,perfumes industries etc.
	6	Paper –VI(Computational botany) course code – BO.336	<ol style="list-style-type: none"> 1. In statistics to study the various parameters. 2. Statistics used in botany to various purposes like stomata number, NO. of plants per area. 3. Introduce the students concept and methods use in bio statistical treatment of data. 4. Biostatistic provide crucial guidance in determining what information is reliable and which production can be trusted.
T.Y Bsc. (Sem-II)	1	Paper I (Plant Physiology and Biochemistry) course code – BO.341	<ol style="list-style-type: none"> 1) It was very important to know the functions of a living organisms or any of its parts. 2)The main objective of this course was to understand how plant live and functions. 3) To demonstrate knowledge and understanding as the molecular machinery of living cell. 4) Studied basic principles and basic mechanisms of metabolic control and molecular signaling.
	2	Paper II (Plant Ecology and Biodiversity) course code – BO.342	<ol style="list-style-type: none"> 1) Knowledge about the interaction between biotic and abiotic factor of environment. 2)Adaptations of plant in different types of environmental conditions 3)To understand the nature of environmental influences on individual organisms, their populations and communities on Ecosystems 4) The interrelationship between organisms in population and communities.
	3	Paper II (Plant Pathology) course code – BO.343	<ol style="list-style-type: none"> 1)To studied the diseases or disorders caused by biotic and abiotic agent 2) To studied mechanisms of diseases development by pathogens. 3) Studied of interactions between plant and pathogen in relation to the overall environment.

			4) Developed suitable management strategies for managing the diseases and losses caused by them.
	4	Paper IV (Medicinal and Economic Botany) course code – BO.344	1) It was important for pharmaceuticals. 2) It was important in Ayurveda. 3) In Economic to identify evaluated the economic important of medicinal plants. 4) Studied of relationship between people and plants.
	5	Paper V(Plant biotechnology) course code – BO.345	1) To studied of application of science and technology to plants. 2) Improvement of varieties according to relevant agronomic features. 3) Natural diversity exploitation and biodiversity protection 4) Knowledge about bio factories.
	6	Paper VI (Plant breeding and Seed Technology) course code – BO.346	1) The prime aim of plant breeding was to improve the characteristics of plant. 2) To improve the seed varieties, seed qualities etc. 3) To improved the plant varieties. 4) To studied the hybridization technique.
	T.Y.B.SC .	Physical Chemistry Sem-I & II	1)studying this topic students are learned that. Expression for rate constant k for third order reaction ii. Examples of third order reaction iii. Characteristics of third order rate constant k iv. Derivation for half-life period of third order reaction and to show that half-life is inversely proportional to square of initial concentration of reactants. v. Experimental determination of order of reaction by Integrated rate equation method 2) studying this topic students are learned that i. Ohm's law and electrical units such as coulomb, Ampere, Ohm and Volt. ii. Meaning of specific resistance, specific conductance, cell constant and their units. iii. Cell constant, its theoretical and experimental determination. iv. Preparation of conductivity water. v. Experimental determination of conductance. vi. Variation of specific and equivalent conductance of strong and weak electrolyte with dilution vii. Meaning of infinitely dilute solution. viii. Kohlrausch's law of independent migration of ions and its applications such equivalent conductance of weak electrolyte at zero conc., degree of dissociation (α), ionic product of water. 3)) studying this topic students are learned that i. Meaning and Types of equilibrium such as true or static, metastable and Unstable equilibrium. ii. Meaning of phase, component and degree of freedom. iii. Derivation of phase rule. iv. Explanation of water system : Description of the curve, Phase rule relationship and typical features. v. Explanation of sulphur system : Description of the curve, Phase rule relationship and typical features. vi. Explanation of two component system curve : for silver-lead and Zinc-cadmium. 4) studying this topic students are learned that i. What is

			<p>mean by Electrochemical cell with specific example ii. Origin of EMF of electrochemical cell. iii. Conventions used to represent electrochemical cell. iv. Thermodynamic conditions of reversible cell v. Explanations of reversible and irreversible electrochemical cell with suitable example. vi. What is mean by reference electrode? vii. Primary and secondary reference electrode viii. Construction, representation, working and limitation of Standard hydrogen Electrode ix. Construction, representation and working of Calomel and Silver –Silver Chloride electrode x. Types of electrodes xi. Conditions of Standard Cell xii. Construction, representation and working of Weston Standard Cell. xiii. Measurement of EMF of electrochemical cell xiv. Nernst Equation for theoretical determination of EMF. xv. Thermodynamics and EMF: Relation of EMF with ΔG, ΔG°, ΔH, ΔS and equilibrium constant K of the cell reaction. xvi. Explanation of the term liquid junction potential</p> <p>5) studying this topic students are learned that i. Distinguish between crystalline and amorphous solids / anisotropic and isotropic solid ii. Explain the term crystallography and laws of crystallography iii. Weiss and Millers Indices iv. Crystal system and their characteristics v. Explain the term polymorphism /allotrophism vi. Distance between the planes for 100, 110 and 111 type of simple, body centred and face centred cubic crystals vii. Bragg's experiment and Derivation of $(n\lambda = 2d\sin\theta)$ Bragg's equation viii. Explanation: Structure of NaCl can be ascertained with the help of X-ray analysis. ix. Laue's and Bragg's method.</p>
	T.Y.B.Sc -(sem I)	Industrial Chemistry	<p>i. Importance of chemical industry, ii. Meaning of the terms involved, iii. Comparison between batch and continuous process, iv. Knowledge of various industrial aspects2) ii. Nutritive aspects of food constituents, iii. Quality factors and their measurements, iv. Food deterioration factors and their control;</p>
	T.Y.B.Sc -(sem-II)		<p>Students should know i. Basics of polymer, ii. ii. Nomenclature, iii. Degree of polymerization, iv. Classification of polymerization reactions,2 The students are expected to learn i. Importance of sugar industry,3) Students should know about i. Different types of soap products, ii. Chemistry of soap.</p>

F.Y.BSc(Computer Science)

Class	Sr.no	Sub Name	outcomes
F.Y.BSc(Computer Science)	1	Problem Solving Using Computers and 'C' Programming COURSE CODE:-CS-101	1) Students are now able to solve problem 2) Students are able to do 'C' programs 3) Their basic principles are developed
	2	File Organization and Fundamental of Databases COURSE CODE:-CS-102	1) Students can now process data using computer 2) They can write queries, create database 3) They understood file organization
	3	Subject Name : Discrete Mathematics	1) the students take a sufficient knowledge of fundamental principles ,methods and a clear perception of innumerable power of Statistical ideas and tools and know how to use them by modeling ,solving and interpreting. 2) Reflecting the broad nature of the subject and developing Statistical tools for continuing further study in various fields of science. 3) A student take be able to recall basic facts about mathematics and should be able to display knowledge of conventions such as notations, terminology and recognize basic geometrical figures and graphical displays ,state important facts resulting from their studies. 4) A student takes relational understanding of statistical concepts and concerned structures, and should be able to follow the patterns involved, mathematical reasoning.
	4	Subject Name: Algebra and Calculus	1) A student know the of history of statistics and hence of its pastpresent and future role as part of our culture.

			<p>2) students develop a positive attitude towards Statistics as an interesting and valuable subject of study.</p> <p>3) student prepare the statistical models related to basic statistics.</p>
	5	<p>Subject Name: Multivariable Calculus II Course Code: MT222(A)</p>	<p>1) Students Solve the mathematical problem by using appropriate mathematical formulae or techniques.</p> <p>2) students enhanced overall development and to equip them with mathematical modeling abilities, problem solving skills, creative talent and power of communication.</p> <p>3) students acquired knowledge of basic mathematics</p>
		<p>Subject Name : Statistical Methods -I</p>	<p>1) the students take a sufficient knowledge of fundamental principles, methods and a clear perception of the power of Statistical ideas and tools and know how to use them by modeling, solving and interpreting.</p> <p>2) Reflecting the broad nature of the subject and developing Statistical tools for continuing further study in various fields of science.</p> <p>3) A student take be able to recall basic facts about mathematics and should be able to display knowledge of conventions such as notations, terminology and recognize basic geometrical figures and graphical displays, state important facts resulting from their studies.</p> <p>4) A student takes relational understanding of statistical concepts and concerned structures, and should be able to follow the patterns involved, mathematical reasoning.</p>

		Subject Name: Statistical Methods -II	<p>1) A student know the of history of statistics and hence of its pastpresent and future role as part of our culture.</p> <p>2) students develop a positive attitude towards Statistics as aninteresting and valuable subject of study.</p> <p>3)student prepare the statisticals models related to basic statistics.</p>
		Subject Name: Multivariable Calculus II Couse Code: MT222(A)	<p>1)Students Solve the mathematical problem by using appropriate mathematical formulae or techiques.</p> <p>2) students enhanced overall development and to equip them with mathematical modeling abilities, problem solving skills , creative talent and power of communication.</p> <p>3) students acquired knowledge of basic mathematics</p>
		Principles of Analog Electronics	<p>1 To understand basic concept of analog electronics.</p> <p>2) To gat familiar with passive components.</p> <p>3) To understand basic concept of Semiconductor devices</p> <p>4 To understand Basic Circuits using Active Devices.</p>
		Principles of Digital Electronics	<p>1) To get familiar with Number systems and Logic Gates.</p> <p>2) To understand concept of Boolean algebra.</p> <p>3) To understand basics of Combinational Circuits and Sequential circuits.</p> <p>4) To understand Semiconductor Memories</p>

S.Y.BSc(Computer Science)

Class	Sr. No.	Sub Name	Outcomes
S.Y.BSc(Computer Science)	1	CS-211:Data Structures using 'C'	1) Students can now organize large amount of data. 2) They can now create different data structures. Like linked list, stack, queue etc. 3) They can solve different problems using data structure.
	2	CS-212: Relational Database Management System	1) Students are now able to create database for large system. 2) They understood the importance of DBMS. 3) They can maintain the security in large database.

			4) They understood importance of database in real life.
	3	CS-221:Object Oriented Concepts using C++	1) Students understood the concept of object oriented programming. 2) They can now implement concept like inheritance, polymorphism, data hiding in programs. 3) They understood importance of allocation and de-allocation of memory.
	4	CS-222:Software Engineering	1) They understood all phases of software development 2) They can create blue print of project 3) They are able to design different software's
	5	Subject Name : Applied Algebra Course code: : MTC 211	1)the students takes a sufficient knowledge of fundamental principles ,methods and a clear perception of innumerous power of mathematical ideas and tools and know how to use them by modeling ,solving and interpreting. 2) Reflecting the broad nature of the subject and developing mathematical tools for continuing further study in various fields of science. 3) A student take be able to recall basic facts about mathematics and should be able to display knowledge of conventions such as notations, terminology and recognize basic geometrical figures and graphical displays ,state important facts resulting from their studies. 4) A student takes relational understanding of mathematical concepts and concerned structures, and should be able to follow the patterns involved, mathematical reasoning.
		Subject Name: Numerical Analysis CourseCode:MTC 212	1) A student know the of history of mathematics and hence of its pastpresent and future role as part of our culture. 2) students develop a positive attitude towards mathematics as aninteresting and valuable subject of study.

			3) student prepare the mathematical models related to basic mathematics.
		<p>Subject Name : Computational Geometry</p> <p>Course Code: MTC 221</p> <p>Subject Name : Operations Research</p> <p>Course Code: MTC 222</p>	<p>1) A student apply their skills and knowledge, that is, translate information presented verbally into mathematical form, select and use appropriate mathematical formulae or techniques in order to process the information and draw the relevant conclusion.</p> <p>2) A student takes relational understanding of mathematical concepts and concerned structures, and should be able to follow the patterns involved, mathematical reasoning.</p> <p>3) the student takes a sufficient knowledge of fundamental principles, methods and a clear perception of the power of mathematical ideas and tools and know how to use them by modeling, solving and interpreting</p> <p>1) A student takes relational understanding of mathematical concepts and concerned structures, and should be able to follow the patterns involved, mathematical reasoning.</p> <p>2) students develop a positive attitude towards mathematics as an interesting and valuable subject of study.</p>
		Digital System Hardware	<p>1. To study the applications of logic gates.</p> <p>2. To use K-maps for digital circuit design.</p> <p>3. To study and understand basics of microprocessors</p> <p>4. To understand fundamentals of multicore technology.</p>
		Analog Systems	<p>1) To understand basics of analog electronics</p> <p>2) To study different types of sensors</p> <p>3) To understand different types of signal conditioning circuits</p> <p>4) To learn data conversion techniques</p> <p>5) To apply knowledge of analog systems in different applications</p>

		The 8051 Architecture, Interfacing & Programming	1. To study the basics of 8051 microcontroller 2. To study the Programming and interfacing techniques of 8051 3. To apply knowledge of 8051 to design different application circuits 4. To introduce the basic concepts of advanced Microcontrollers
		Communication Principles	1. To understand basics of communication systems. 2. To understand modulation, demodulation and multiplexing of signals. 3. To understand digital communication techniques 4. To introduce concepts in advanced wireless communication

T.Y.BSc(Computer Science)

Class	Sr. No.	Sub Name	Outcomes
T.Y.BSc(Computer Science)	1	System Program ming (CS-331)	1) Student understood how the editor is designed 2) They knew how the linker and loader works 3) They understood what the assembler and microprocessor does. 4) They understood how the operating system is complex.
	2	Theoretical Computer Science (CS-332)	1) Student understood the use of finite automata , regular language. 2) They understood what the turing machine is ? 3) They understood the use of grammer in compiler construction.

	3	Computer Networks I (CS-333)	<ol style="list-style-type: none"> 1) Students are now able to design the local network. 2) They understood how the communication takes place over network. 3) They understood the various layers and their roles in communication. 4) They understood importance of various protocols in communication.
	4	Internet Programming I (CS-334)	<ol style="list-style-type: none"> 1) Student are able to write server side script using PHP 2) They can now design any website. 3) They can now handle database. 4) They are now familiar with file and directory structure.
	5	Programming in Java I (CS-335)	<ol style="list-style-type: none"> 1) Student understood the concept of object oriented programming language. 2) They can now handle any kind of exception. 3) They can create different frames using swing and AWT. 4) They can handle various event in applet, frames. 5) They can perform various operations on string.
	6	Object Oriented Software Engineering (CS-336)	<ol style="list-style-type: none"> 1) Students understood structural and behavioral modeling language. 2) They can draw different UML diagrams.
	7	Operating System (CS-341)	<ol style="list-style-type: none"> 1) Student understood the algorithms of process mgmt. like FIFO, LRU, MFU etc. 2) They understood how the various process are scheduled. 3) They understood various memory mgmt. algorithms. 4) They understood how the files are managed in operating system.
	8	Compiler Construction (CS-342)	<ol style="list-style-type: none"> 1) Student understood the use of lexical analyzer in compiling programs. 2) They understood the use of parser in programming 3) They understood the YACC concepts 4) They knew the concepts of memory mgmt. concepts.

	9	Computer Networks II (CS-343)	<ol style="list-style-type: none"> 1) Students understood difference between wired and wireless network. 2) They understood various protocols which provides wired and wireless communication. 3) They understood the importance of cryptography in network security.
	10	Internet Programming II (CS-344)	<ol style="list-style-type: none"> 1) Student understood technologies used at client side scripting. 2) They can now develop web pages using CSS, XML, and AJAX. 3) They can write script using java script. 4) They can develop dynamic web pages using AJAX.
	11	Programming in Java II (CS-345)	<ol style="list-style-type: none"> 1) Student are now create database through java programming. 2) They can create games using threads. 3) They can create web pages using servlet, JSP.
	12	Computer Graphics (CS-346)	<ol style="list-style-type: none"> 1) Students understood the uses of C programming in graphics design. 2) They understood the uses of mathematics and geometry concepts in graphics design. 3) They can now create a small game. Like bouncing ball game.