Terna Public Charitable Trust's,

Terna Mahavidyalaya (Arts, Science & Commerce), Osmanabad.

INTERNAL QUALITY ASSURANCE CELL

COURSE OUTCOMES (Cos)

2020-21

INTERNAL QUALITY ASSURANCE CELL

COURSE OUTCOMES

INDEX

Sr. No.	PARTICULARS
1.	COs : Marathi
2.	COs : Hindi
3.	COs : English
4.	COs : Sociology
5.	COs : Economics
6.	COs : Political Science
7.	COs : History
8.	COs : B.Sc. (Computer Science)
9.	COs: Bachelor of Computer Application
10.	COs : M.Sc. (Computer Science)

Course Outcomes

Cos : Marathi

B. A. Marathi F.Y B.A Marathi Paper I & II (S.L) Gadya Padya Upyojit Marathi

1: To introduce learners to the literature of the writers from medieval andmodern time.

2: To make learners aware of social, political, cultural and enomicnditions of the times.

3: To introduce the style of prose, fiction and poetry.

F.Y.B.A Marathi Paper I (Opt.) Kavytmak Sahitya1: To introduce students to Marathi Poetry.

2: To understand Marathi poetry & nnect it to real life.

3: To understand various ideologies, movements in the history of Marathipoetry.

F.Y.B.A Marathi Paper II (Opt) NATYATMAK WANGMAY1: To understand Marathi language and drama.

2: To acquire and understand realistic view of life.

3: To express the fabulous dramatics.

4: To enhance expression, thoughts, ideas and all characteristic of human humanities through drama.

F.Y. BA Marathi Paper III (Opt.) Kathatmak Sahitya

1: To introduce students to Marathi story literature.

2: To enhance learner's interest in Marathi stories & nnect it to real life.

3: To understand ideologies and movements in the history of Marathilanguage & literature.

F.Y. B.A. Marathi Paper IV (Opt) MUDRIT MADHAMASATHI LEKHAN KAUSHALUA

1: To understand mmunication skills.

2: To acquire realistic view in Marathi literature.

3: To understand the importance of language sources like television, mobile, newspaper and magazine.

B.A. Marathi Paper III&IV (Gadya Padya Upyojit Marathi)1:

Students will get introduced to thoughtful writings.

2: To create awareness about meaning and history of folk culture.

3: To introduce different trends in literature.

4: To understand of literary analysis.

5: To apply literary syntax of Marathi language.

S.Y. B.A. Marathi Paper V (Opt.) Aadhunik Marathi vangmayacha itihas. (1800-1920)

1: To study literature history after 1800.

2: To rrelate social, cultural, social movement ideology during 1800-1920on literature.

3: To understand the background, inspiration, importance of authors &their literary work in 1800-1920.

S.Y.B.A, Marathi Paper Paper VI, VIII (Druk shravya Madhyamansathi lekhan kaushalya)

1: To introduce functioning and structure of radio language.

2: To acquire skills of radio anchor.

3: To understand production of different programmes on radio

Marathi Paper VII (Opt.) Aadhunik Marathi vangmayacha itihas.(1800-1920)

1: To introduce learners to theatre culture, tradition, development andemergence of Marathi theatre.

2: To familiarize with Annasaheb kirloskar and his ntribution.

3: To study translated literature & different types of literature such asperiodic, story, poetry, novel, biography and autobiography.

T.Y.B.A. Marathi Paper IX & XIII (OPT) (Bhartiy aani pashchimatya sahitya vichar)

1: To introduce students with basic scientific - Indian and foreign literature.

2: To understand types of literature.

3: To develop clear concepts in literature.

T.Y.B.A, Marathi   Paper,   X,   XIV (Opt.)(Bhasha   Vidnyan: Vyakran   vNibandha)

1: To create awareness about the structural patterns of sounds in Marathi.

2: To inculcate ideas about history and development of Marathi languageand its spoken forms.

3: To understand Marathi grammar.

4: To enhance pronunciation skill.

4: To understand Marathi grammar in various forms - word formation,suffix & prefixes.

T.Y. B.A. Marathi Paper XI (MAIN) Madhyayugin Marathi vangmayacha itihas. (Start to 1600)

1: To understand different ages of Marathi.

2: To understand Mahanubhav Sect and their ntribution in Marathiliterature.

3: Specialty of ideology, philosophy of mahanubhav sect & their literarywork.

T.Y. B.A. Marathi Paper XI (MAIN) Madhyayugin Marathi vangmayachaitihas. (1601 - 1818)

1: To understand Panditi sahitya and their inspiration, specialty andstructure.

2: To know pandit kavi and his literature.

3: To understand ntribution of Shahiri literature, inspiration, structureand specialty.

T.Y.B.A. Marathi Paper XII & XVI (Main Project)

After mpletion of the urse, learners will be able to …..

1: nvey massage or motto with a story.

2: To think independently.

3: To enhance thinking ability and create interest in Marathi languag

Course Outcomes

Hindi

बी. ए.

सामान्य हिंदी (SL I & II) (बी.ए., बी. कॉम., बी. एस्सी.)

1: मानवीय संवेदनाओं का विकास हो जाता है और इंसानीयत को बढ़ावा मिलता है।

2: हिंदी कहानी साहित्य का परिचय मिल जाता है।

3: हिंदी के प्रमुख लेखक और और उनकी लेखन विशेषताओं का परिचय प्राप्त होता है।

4: विद्यार्थिओं के भाषा कौशल का विकास होता है।

प्रश्नपत्र 1 उपन्यास साहित्य

1: विद्यार्थियों की साहित्यिक अभिरूचि का विकास और साहित्य आस्वादन का आनंद देना।

2: इंसानी जीवन मूल्यों का विकास और उनके प्रति आस्था निर्माण करना।

3: उपन्यास साहित्य की बारिकियों से परिचित करना और हिंदी उपन्यास साहित्य की पहचान करना।

4: लेखन और भाषा कौशल का विकास करना।

प्रश्नपत्र 2 नाटक साहित्य

1: हिंदी नाटकों और उसके बहाने साहित्य में नाट्य परंपरा, हिंदी रंगमच, अभिनय तथा व्यावसायिक नाटकों से परिचित करना।

2: 'विजयपर्व' नाटक से अशोक की जिंदगी का संघर्ष, युवराज से राजगद्दी और फिर राजगद्दी से निर्वाण तक के सफर का प्रयास युद्ध से शांति भली है की स्थितियों को बयां करता है। अतः विद्यार्थियों पर संघर्ष, रक्तपात, लड़ाई से शांति भली है के संस्कार हो जाता है।

3: 'होरी' नाटक प्रेमचंद का है। इस नाटक के अध्ययन के पश्चात् किसानों की दयनीयता, जमीन से जुड़ना, पारिवारिक संघर्ष आदि का परिचय मिला। विद्यार्थी भी पहले से किसान परिवारों से जुड़े हैं, अतः 'होरी' नाटक में चित्रित पात्र उन्होंने अपने घरों में बसे हैं ऐसा एहसास किया है। बिना पढाई के क्या होता है इसका परिचय भी पाया है। अतः शिक्षा से आत्मनिर्भर बनने की प्रेरणा, सम्मान पाने की लालसा विद्यार्थियों में जगती है।

प्रश्नपत्र 3 हिंदी गद्य साहित्य

1: हिंदी कहानी और व्यंग्य साहित्य का अध्ययन करना।

2: इंसानी जीवन मूल्यों और संवेदनाओं का विकास और उनके प्रति आस्था निर्माण करना।

3: साहित्य आस्वादन और मूल्यांकन क्षमता का विकास करना ।

4: हिंदी साहित्य की गद्य विधाओं का परिचय करवाना।

प्रश्नपत्र 4- एकांकी साहित्य

1: एकांकी नाटक की तुलना में छोटी विधा है। प्रथम सत्र में नाटकों का अध्ययन और द्वितीय सत्र में एकांकी का अध्ययन है। इससे विद्यार्थियों को नाटक और एकांकी के बिच का फर्क समझ में आता है।

2: हिंदी एकांकी के उद्भव और विकास से विद्यार्थी परिचित होता है।

3: एकांकी के माध्यम से मानवीय संवेदनाओं का अध्ययन हो गया और जीवन में मानवीय मूल्यों से विद्यार्थी परिचित हो गए। छोटी-छोटी घटनाओं का जीवन में क्या महत्त्व है, इसका परिचय भी विद्यार्थियों को हो गया है।

सामान्य हिंदी (SL-III & IV) (बी.ए., बी. कॉम., बी. एस्सी.)

1: साहित्य आस्वादन अभिरूचि का परिसंस्कार करना। 2: जीवन मूल्यों के प्रति आस्था निर्माण करना।

3: हिंदी के आधुनिक गद्य साहित्य की प्रतिनिधिक रचनाओम का परिचय करना ।

4: अत्याधुनिक इलेक्ट्रॉनिक माध्यमों का परिचय करना ।

s: व्यावहारिक, प्रयोजनमूलक तथा संप्रेषणमूलक व्यावसायिक हिंदी भाषा से विद्यार्थी परिचित हो और रोजमर्रा की जिंदगी में अपनी मांगों को पूरा करने में सक्षमता पाए यह अपेक्षा भी इस पाठ्यक्रम की रही है।

6: पत्रलेखन के सारे प्रकार, आवेदन पत्र, बैंकिंग तथा सरकारी कार्यालयों की प्रयोजनमूलक भाषा से विद्यार्थी परिचित होता है।

प्रश्नपत्र 5- कथेत्तर गद्य साहित्य

1: कथेत्तर गद्य साहित्य पेपर रखने का उद्देश्य यहीं है कि हिंदी के विद्यार्थी हिंदी साहित्य के कथेत्तर विधाओं से परिचित हो।

2: 'गद्य गौरव और गद्य प्रभा किताब के माध्यम से विद्यार्थी रेखाचित्र, निबंध, संस्मरण, जीवनीपरख लेख, व्यंग्य, आत्मकथा अंश, यात्रा वृतांत, लेख आदि विधाओं से भलीभांति परिचित हो।

3: साहित्य के विविध विधाओं के आस्वादन का आनंद लेने की आदत और अभिरुचि विकास भी विद्यार्थियों में करना।

प्रश्नपत्र 6- प्रयोजनमूलक हिंदी

1: हिंदी भाषा के प्रयोजनमूलक रूप का परिचय करना ।

2 हिंदी भाषा की व्यावहारिकता पर प्रकाश डालना।

3: भारत देश की राष्ट्रभाषा होने के नाते हिंदी भाषा की एहमीयत का मूल्यांकन करना।

4: हिंदी के राष्ट्रीय और आंतर्राष्ट्रीय स्वरूप का मूल्यांकन करना।

प्रश्नपत्र 7 आधुनिक हिंदी कविता

1: हिंदी साहित्य के पद्य (कविता) के उद्भव और विकास पर प्रकाश डालना, हिंदी कविता के प्रति विद्यार्थियों की अभिरुचि की वृद्धि करना, मानवीय भाव-भावनाएं और संवेदनाओं का विकास करना इस पाठ्यक्रम का उद्देश्य है।

2: नागार्जुन द्वारा लिखित खंडकाव्य भूमिजा रामायण के कथा प्रसंग पर प्रकाश डालता है। सीता का ऐतिहासिक मूल्यांकन करते हुए एक नारी के नाते उसकी कौनसी शिकायतें राजा, पति, पुरुष और राज्य के प्रति रही है इसका लंबा मूल्यांकन करना। अर्थात नारी जीवन के संघर्ष और विद्रोह का परिचय इस खंडकाव्य का उद्देश्य है।

3: विद्यार्थी 'रामायण', 'रामचरितमानस तथा अन्य रामायण कथा पर केंद्रित रचनाओं से एक अलग रचना से परिचित हो गए हैं, जिसमें सीता का एक स्त्री होने के नाते पुरुषों के प्रति विद्रोह है इसका परिचय करवाना।

प्रश्नपत्र 8 प्रयोजनमूलक हिंदी

1: हिंदी भाषा के विविध रूपों का परिचय करना।

2: राजभाषा हिंदी के विविध रूपों का परिचय करना ।

3: प्रयोजनमूलक भाषा तथा अनुवाद की भूमिका का परिचय करना ।

4: हिंदी भाषा के प्रयोजनमूलक और व्यावहारिक रूप का परिचय करना । 5: भारत देश की राष्ट्रभाषा होने के नाते हिंदी भाषा की एहमीयत का मूल्यांकन करना ।

प्रश्नपत्र 9 - प्रादेशिक साहित्य

1: साहित्य आस्वादन और अभिरूचि का परिष्कार करना।

2: जीवन मूल्यों के प्रति आस्था निर्माण करना।

3: भारतीय साहित्य का अध्ययन करना।

प्रश्नपत्र 10- आदि तथा मध्यकालीन हिंदी साहित्य का इतिहास

1: हिंदी साहित्य के इतिहास तथा आरंभिक काल का परिचय करना।

2: हिंदी साहित्य के लेखन स्रोतों एवं परंपराओं पर प्रकाश डालना।

3: हिंदी साहित्य आदिकाल, भक्तिकाल और रीतिकाल का परिचय देना

प्रश्नपत्र 11- साहित्यशास्त्र

1: साहित्य चिंतन परंपरा का अध्ययन करना।

2: साहित्यालोचन क्षमता का परिचय करना ।

3: साहित्य सृजन के संस्कार करना ।

4: साहित्य एक प्रकार से शास्त्र है, उसका पढना, चिंतन, आकलन, मूल्यांकन और सृजन करना एक प्रकार की शास्त्रीय तकनीक है। इसी तकनीक का विकास करना इस पाठ्यक्रम का उद्देश्य है।

7: साहित्य का मूल्यांकन करने का नजरिया भी विकसित करना। साहित्य के कलापक्षीय अंगों पर प्रकाश डालने की दृष्टि का विकास करना ।

प्रश्नपत्र 12 व 16 प्रकल्प कार्य

1: पठन-पाठन और लेखन कौशलों का विकास करना।

2: आलोचनात्मक क्षमता का विकास करना ।

3: अनुसंधात्मक दृष्टि का विकास करना।

प्रश्नपत्र 13- मध्यकालीन काव्य

1: भारतीय भक्ति आंदोलन का अध्ययन करना।

2 : रीतिकालीन संवेदनाओं का अध्ययन करना।

3: कविताओं के माध्यम से मध्यकालीन सांस्कृतिक संवेदना का अध्ययन करना।

4: भक्ति तथा रीतिकालीन पृष्ठभूमि और प्रवृत्तियों से विद्यार्थियों को परिचित करना।

प्रश्नपत्र 14 - आधुनिक हिंदी साहित्य का इतिहास

1: हिंदी साहित्य के आधुनिक काल का परिचय करना ।

2 : हिंदी साहित्य के आधुनिक काल की पृष्ठभूमि और प्रवृत्तियों पर प्रकाश डालना।

3: हिंदी साहित्य के आधुनिक काल में कविता और गद्य लेखन के विविध प्रकारों का आकलन और मूल्यांकन ।

प्रश्नपत्र 15- साहित्यशास्त्र

1: साहित्य चिंतन परंपरा का अध्ययन करना ।

2 : साहित्यालोचन क्षमता का परिचय करना ।

3: साहित्य सृजन के संस्कार करना ।

4: साहित्य के रस, अलंकार, छंद, विविध विधाओं का स्वरूप, आलोचना आदि अंगों का परिचय विद्यार्थियों को करवाना।

Course Outcomes

English

B. A. English Paper II & IV: Reading Literature Aim of the urse

1: To enable students to read and appreciate various forms of literature and critically interact with them from different perspectives.

2: To introduce students to appropriate literary strategies and literature.

3: To pinpoint how far literary language deviates from ordinary language.

4: To unravel many meanings in a literary text.

Paper IV: Semester Two Unit One: Methodology of Literature

1: To develop appreciation for the purposes and pleasures of prose fiction and nonfiction.

2: To articulate ways that literary works to construst values and ethical meanings.

3: To practice analytical reading on multiple examples of each genre chosen.

5: To identify major features of literary forms and construst arguments.

BA II English Optional

1: To enable students to read and appreciate various forms of literature and critically interact with different perspectives.

2: To introduce learners with appropriate literary strategies.

3: To pinpoint how far literary language deviates from ordinary language.

Paper V &VII: LITERATURE IN ENGLISH 1550-1750 Paper V: Semester III

On successful mpletion of the urse, the students will be able to:

1: Interpret various forms of literature.

2: Distinguish and analyze literary forms like essay, mock epic, drama andnovel.

3: Unravel many meaning in literary text.

Paper VI & VIII: LITERATURE IN ENGLISH 1750-1900 Paper VI: SemesterIII

On successful mpletion of the urse, the students will be able to:

1: Understand literary forms of poetry: Ballad and dramatic monologue,romantic poetry, prose, play and novel in 18th century and 19th century.

2: Appreciate the poems of S.T. leridge and Robert Browning.

3: Understand plot, characters and setting in the novel of Thomas Hardy.

BA III English Optional

1: To introduce students to Modern English Literature.

2: To familiarize students with literary terms and introduce them with various streams in literary criticism and develop skills for literary evaluation.

3: To help learners to approach and appreciate Indian literature in English and make them see its place among world literature in English.

4: To introduce students to American literature and its diverse cultures reflected in writing.

Paper IX & XIII: Twentieth Century English Literature Semester VContents: Unit One: Poetry

On successful mpletion of the urse, the students will be able to:

1: Understand how the literature of modern period relates to the importanttrends of 20th century.

2: Appreciate poem by T.S. Eliot and W.B Yeats.

3: mment on the themes of Osborne and G.B Shaw's plays.

Paper X & XIV: Introduction to Literary Criticism and Terms Semester

On successful mpletion of the urse, students will be able to …..

1: Identify and discuss classical Greek critics of literature.

2: Provide a brief overview of major critical theories by critics like Aristotle,Sir Philip Sidney, William Wordsworth and F.R. Leavis.

3: Learn the terms related to various genres of literature.

Paper XI & XV: Indian Writing in English

After studying the urse, the learners will be able to…..

1: To understand nineteenth Century Reform - Movements in India; the Indian National Movement; Rise of the Indian Novel and Caste-Class.

2: To beme aware of social, political, and cultural issues reflected in Indian writing in English, with reference to Indian social reformations, freedom struggle, women education and empowerment in nineteenthcentury.

3: To appreciate artistic and innovative use of language employed by writersto instill values and develop human ncern through literary texts.

Semester V Poetry:

On successful mpletion of the urse, the students will be able to….

1: Understand background of Indian English literature and its development.

2: Critically appreciate themes in poems of Nissim Ezekiel and ArunKolatkar.

3: Understand and evaluate themes, plot, character in the plays of GirishKarnad and Vijay Tendulkar.

Paper XII & XVI: Project Work on History of English Literature

1: To understand the background of English literature and empowerlearners on its development.

2: To understand different aspects of research methodology.

3: To understand new trends, movements in English literature.

Course Outcomes

Sociology

B. A. Sociology B.A. Part-I, Semester I Paper no-I: - Introduction tosociology & Paper No-II:-Individual & Society

On the studying the urse, the leaners will be able to …..

1: Familiarize with basic concepts of sociology.

2: Understand significance of sociology.

3: Understand the spe and importance of sociology, its origin anddevelopment.

part-I, Semester II, Paper no III - Introduction to Subfields ofSociology& Paper No IV – Indian Social composition

1: Students acquire knowledge to understand the spe of sociology & itswideness.

2: To understand broad segments of Indian society.

3: To understand India's geographical ethnic and religious distinctiveness.

B.A. Part-II, Semester III Paper No-V: -Problems of Rural India Paper no-VI: - Contemporary Urban Issues

1: Learners will be made aware of changing scenario of Rural India and the ntemporary problems of rural development.

2: Learners are inculcated with analytical and thinking about urbanizationurban planning and urban problems.

B.A. part-II, Semester IV Paper no- VII: Population in India Paper No-VIII: - Sociology of Development

1: To understand causes, nsequences of Indian population change.

2: To provide an overview of development Issues in India.

B.A. part-III Semester V paper: - Paper IX: Sociological Tradition Paper No. X: Introduction to Research Methodology Paper No. XII (Main) Urban Sociology

1: To provide the students with basic understanding of emergence of sociological thoughts.

2: To develop sociologists with their ntributions to sociology.

2: To introduce Research Methodology for better understanding of application of social sciences.

3: To enable learners with urban sociology.

4: To mprehend the basic elements of subject.

B. A. part - III Semester VI Paper NoXIII. : Sociological Theories Paper No. XIV: Social Research Methods Paper No.XVI: Urban Society in India

1: Acquaintance with the sociological thought of the Pioneers ofSociology

2: To introduce students with various steps in conducting research.

3: To analyze critically social problems of urban India.

Course Outcomes

Economics

B.A. Economics Micro Economics:

1: To provide foundations of economics.

2: To understand spe of micro-economics, the behavior of an economic agents - namely, a nsumer, a producer, a factor owner and the price fluctuation in a market.

3: To study behavior of a unit and analysis.

Price Theory:

1: To understand different components regarding price determination undervarious types of markets.

2: To understand theory of production, st and revenue analysis, forms ofmarket and factor pricing theories.

Indian Economy:

1: To study analytical factor of the students, by highlighting an integrated approach to be functioning aspects of the Indian enomy, keeping in view the spe for alternative approaches.

2: To study social, political and enomic environment influencing policy decisions.

3: To develop specific modules.

Macro Economics:

1: To create awareness of basic theoretical frameworks underlying the field of macroenomics.

Development Economics:

1: To understand theories and developments underlying the field of development enomics.

International Economics:

1: To understand the basic principles that trend to govern the free flow oftrade in goods and services at global level.

2: To understand and analyze the difference between various enomies ofthe world.

Agricultural Economics:

1: To study the treatment of issues in agriculture enomics to thoseintending to specialize in the area.

2: To familiarize students with policy issues those are relevant to Indian agricultural enomics.

3: To analyze the issues using basic micro enomics.

History of Economic Thought:

1: To understand the basic ideas of classical, new classical and marginality enomist.

2: To compare the basic enomic ideas of various enomic thinkers of theworld.

Money Banking and Finance:

1: To understand role of money and banking as the components of modernenomy.

2: To understand the operations of money and banking.

3: To study interaction of money and banking with the rest of the enomy.

4: To understand monetary and banking systems in India.

Public Finance:

1: To study the significance and spe of Public Finance.

2: To provide detailed information about the fiscal policy, public revenue,public debt and public expenditure.

Statistical Methods:

1: To understand techniques of statistical analysis which are mmonlyapplied to enomic problems.

2: To study the tools and techniques of statistical methods.

3: To understand data llection, its presentation, analysis and making inferences.

Research Methodology:

1: To understand the ncept of social science research.

2: To know the importance of social research, design of research problem, data llection and presentation of data.

3: To understand the idea of research in social sciences.

Industrial Economics:

1: To understand basics of industrial economics.

2: To study globalization and liberalization in c ntemporary world.

Economy of Maharashtra:

1: To understand the basic features of economy of Maharashtra.

2: To study the problems related with agriculture, industries, operative sector and infrastructure in the Maharashtra state.

Course Outcomes

Political Science

B. A. Political Science Pol-101, Basic concept of Political Science

1: To understand the basics of political science.

2: To study the development of rights- state background of political history.

3: To analyze transitions in societal systems - the structure and order of thesystem.

Pol-102, Government and Politics of Maharashtra

1: To establish pattern of Maharashtra State.

2: To examine the government and non-government responses.

3: To understand history of the Freedom Movement in India llected fromthe Bombay Government Rerds.

4: To understand historical and political background of Maharashtra.

Pol-103, Basic concept of Political Science

1: To define terms in a social science outside their immediate area ofexpertise.

2: To create awareness among students about democracy.

3: To help students to understand social and political values in Indianpolitical system.

Pol-104, Government and Politics of Maharashtra

1: To study elections and election process.

2: To provide solution to social problems.

3: To study Panchayat raj History.

4: To orient the students about ideology and programme of political partiesin Maharashtra.

Pol-105, Indian Government and Politics

1: To study the prosperity of society.

2: To understand political events in government of India.

3: To understand basic principles of Indian nstitution.

4: To study the Indian nstitution.

Pol-106 International Relations

1: To understand the behavior of individual entrepreneurs and firms ratherthan world politics, liberalism.

2: To understand   important   implications   for   international   law   and international relations.

3: To explain basic concepts in international relations.

Semester - IV Pol-107, Indian Government and Politics

1: To explain structure of union government and budgetary process inIndia.

2: To understand the framework of Indian supreme urt.

3: To explain party system and electoral reforms.

Pol-108, International Relations

1: To explore the nature of informal reasoning in international relations andto nsider how iconstrustion uld help enhance.

2: To study various international and regional organization.

3: To aware the students about major issues in internationalism.

Semester V Pol - 109, Indian Political Thinkers

1: To understand modern political thinker's ntribution.

2: To learn the problems in cultural transformation of Indians into non-Indians.

3: To study the religious, political, social and cultural thoughts of Indian political thinkers.

Pol - 110, Western Political Thinkers 33

1: To understand the views of western political thinkers.

2: To understand the ideas of western political thinkers and its relevance.

3: To understand the thoughts of Plato on various political concepts.

4: To know ideas of Aristotle and his role in western politics.

Pol - 112, Indian Political Thinkers

1: To study Dr. B.R. Ambedkar's thoughts on democracy, enomy andsociety.

2: To evaluate critically M. N. Roy's radical humanism.

3: To understand Nehru's democratic and secular views and its applicability.

4: To know of ideas of Maulana Azad views on religion and politics.

Pol - 113, Western Political Thinkers

1: To present thoroughly the wealth of historical and institutional materials.

2: To study the thoughts of J. S. Mill and its applicability.

3: To evaluate critically the thoughts of Karl Marx and its relevance.

4: To understand the theory of utilitarianism.

Pol – 111, Political Ideologies

1: To study the development and features of political ideologies.

2: To understand relevance of political ideology in ntemporary period.

3: To study the origin of ideologies and clash of three political ideologies - liberalism, mmunism, and fascism.

4: To rrelate the theoretical discussion and analysis of ideologies to the transformations.

Pol - 114, Political Ideologies

1: To study of ideology of socialism.

2: To evaluate critically the ideology of fascism.

3: To study the development and features of mmunism.

4: To explain the ideology of feminism.

Course Outcomes

History

B. A. History Shivaji and His Times (1630-1818)

1: To introduce leaners about the innovative study techniques in the ofHistory of Marathas.

2: To provide value based nceptual and thought provocative.

3: To provide insights into the Mughal rulers and the Maratha Empire.

4: To introduce international elements in the study of Marathas to facilitate comparative analysis of the history.

History of Modern Maharashtra (1818-1960)

1: To familiarize students to the study of Maharashtra.

2: To acquaint learners with the basic understanding of developmentalstage of Maharashtra.

3: To impart high quality education to the students with reference toMaharashtra.

4: To prepare the students for a variety of challenging careers throughinnovation in teaching and research.

.

History of Early India (up to B.C. 300)

1: To understand the ancient Indian history.

2: To understand the nature of races and tribes intermingled in early India.

3: To evaluate Hinduism, Jainism, and Buddhism in ancient times.

4: To understand the nature of past and obstacles that impedes India'sprogress as a nation.

History General Paper-VIII History of Mughal India (A.D. 1526- A.D. 1757)1:

To understand the Mughal ntribution to the Indian history.

2: To know the Mughal period.

3: To study Persian art and culture amalgamated with native Indian art andculture.

4: To study the political unity provided by the Mughal rulers.

History General Paper – IX Historiography

1: To understand and evaluate the development of history as a discipline.

2: To understand writing of historical acunts.

3: To highlight the significance of thinking "historiographically".

4: To provide new angles to research and interpretations.

History General Paper-X History of Indian national Movement (A.D. 1885-A.D. 1947)

1: To provide a mprehensive understanding of the transformations in theenomy of lonial India.

2: To introduce land and agrarian policies under the British rule.

3: To develop nationalism in learner's mind.

4: To understand the British enomic policy and Indian revolts.

Course Outcomes

BCA

BCA (Science) CA101-T-Cocomputer Fundamental:

1: To familiarize students with computer environment.

2: To familiarize learners with the basics of Operating System and business mmunication tools.

3: To identify parts of computer system.

4: To explain functioning of computer components.

5: To explain the process of problem solving using computers.

6: To design an algorithmic solution for a given problem.

CA102-T- Digital Electronics:

1: To familiar with concepts of digital electronics.

2: To learn number systems and their representation.

3: To understand basic logic gates, Boolean algebra and K-maps.

4: To study arithmetic circuits, mbinational circuits and sequentialcircuits.

CA103-T- 8086 Microprocessor:

1: To understand basic architecture of 16 bit microprocessors.

2: To understand interfacing of 16 bit microprocessor with memory andperipheral chips involving system design.

3: To understand techniques for faster execution of iconstrustions andimprove speed of operation and performance of microprocessors.

.

CA104-T-Programming in C –I:

1: To enable students to learn a programming language.

2: To apply problem solving techniques.

3: To write programs in C language.

4: To read, understand and trace the execution of programs written in C language.

5: To write the C de for a given algorithm.

CA105-T -mmunication skills:

1: To demonstrate preparation and research skills for oral presentations.

2: To develop proper listening skills.

3: To articulate and enunciate words and sentences clearly and efficiently.

4: To enhance nfidence and clarity in public speaking projects.

Goal Two: Written mmunication

1: To understand the rules of spelling and grammar.

2: To read, analyze text and apply ideas in writing.

3: To organize thoughts in a manner that emphasizes flow and paragraph development.

4: To acquire proper footnoting and bibliography skills.

Course Code: CA106-T - Mathematical Foundation:

1: To distinguish between statement logic and predicate logic.

2: To visualize data numerically and/or graphically.

3: To evaluate mathematical principles and logic design.

4: To apply iconduction, proof techniques towards solving recurrences and problems in elementary algebra, adapt, and design elementary deterministic and randomized algorithms to solve mputational problems.

5: To illustrate the basic terminology of functions, relations, and sets and demonstrate knowledge of their associated operations and understanding of mathematical modeling with appropriate examples.

6: To demonstrate effectively mathematical ideas/results verbally or in writing and apply the knowledge of mputing and mathematics.

107P - Office Suite Practical (LAB):

A student will be able to ….

1: Demonstrate mechanics and uses of word tables to organize and presentdata.

2: Demonstrate working knowledge of using Word's themes and clip art tocreate a variety of visual effects.

3: Demonstrate working knowledge of Word's advanced formatting techniques and presentation styles.

4: Demonstrate applicable knowledge and uses of accepted business style formatting nventions.

.

CA107P - Digital Electronics Practical (LAB)

A student will be able to …..

1: Understand and apply use of analog signals to represent digital values in logic families, including characterization of the noise margins.

2: Create appropriate truth table from a description of a mbinational logic function.

CA109-P - Microprocessor-I (8086) Practical (LAB):

A student is able to understand …..

1: Intel 8086 microprocessor architecture and real mode memory addressing.

2: Intel microprocessor addressing modes.

3: Assembly language programming and debugging.

4: Arithmetic calculations using 8086 microprocessor kit.

CA110-P - C Programming-I Practical (LAB)

A student is able to …..

1: Understand the fundamentals of C-programming.

2: Choose loops and decision making statements to solve the problem.

3: Implement different operations on arrays.

4: Basic mathematical calculations.

CA201-T - Data Structures:

1: Students are able to choose appropriate data structure as applied to specified problem definition.

2: Students can handle operations such as searching, insertion, deletion, traversing mechanism etc. on various data structures.

3: Students can apply concepts learned in various domains like DBMS, mpiler construstion etc.

CA202-T -Operating System:

Leaners will be able.….

1: To understand functions, structures and history of operating systems.

2: To understand design issues associated with operating systems.

3: To understand process management concepts including scheduling, synchronization, and deadlocks.

4: To familiarize with multithreading.

5: To study concepts of memory management including virtual memory.

CA203-T - I.T. Tools & Web Designing –I:

1: To learn understand the basics of internet and web designing.

2: To understand architecture of browser, server, web page, web sites &clients.

3: To know about internet domains, protols, browser and server mmunication.

4: To know the basic knowledge of HTML and DHTML language for webpage development.

5: To understand concepts of internet programming using JavaScript.

CA204-T - C-Programming-II:

1: To understand creation of user defined functions for specific task in C language.

2: To understand about functions and its types and working.

3: To understand use of user defined data types such as structures &unions.

4: To enable students for dealing with memory using pointers.

CA205-T - Communication Skill –II:

Leaners will be able…..

1: To demonstrate preparation and acquire skills for oral presentations.

2: To develop proper listening skills.

3: To articulate and enunciate words and sentences clearly and efficiently.

4: To show nfidence and clarity in public speaking projects.

5: To demonstrate ability to gather information and apply it to persuade orarticulate.

Goal Two: Written Communication

1: To understand the rules of spelling and grammar.

2: To read and analyze text and enable learner to summarize ideas inwriting.

3: To organize thoughts in a manner that emphasizes flow and paragraph development.

4: To learn proper footnoting and bibliography skills.

5: To understand   different   writing   techniques   and   styles   based   on   mmunication medium being used.

CA206-T -Numerical Methods:

1: To demonstrate understanding of mmon numerical methods and their application to obtain approximate solutions to intractable mathematical problems.

2: To apply numerical methods to obtain approximate solutions to mathematical problems.

3: To derive numerical methods for various mathematical operations and tasks, such as interpolation, differentiation, integration, the solution of linear and nonlinear equations, and the solution of differential equations.

CA207-P -Data Structure (LAB):

1: To understand the concepts of dynamic memory management, datatypes, algorithms, big O notation.

2: To understand basic data structures such as arrays, linked lists, stacksand queues.

3: To describe hash function and concepts of llision and its resolutionmethods.

CA208-P -I.T. Tools & Web Designing – I (LAB):

A student will be able to …..

1: Explain the history of internet and related internet concepts that are vitalin understanding web development.

2: Discuss the insights of internet programming and implement mpleteapplications over the web.

3: Demonstrate important HTML tags for designing static pages andseparate design from ntent using Cascading Style sheet.

CA209-P- C Programming – II (LAB):

The urse will enable students to …..

1: Implement programs with pointers and arrays, perform pointer arithmetic, and the use of pre-processor.

2: Write programs that perform operations using derived data types.

3: Use pointers and user defined data types.

4: Use functions used in C language.

CA210-P - Numerical Method (LAB):

A student will be able to …..

1: Identify different mathematical problems and reformulate appropriatelyfor numerical data treatment.

2: Choose appropriate numerical methods for treatment of a given problem.

3: Explain choice of method by acunting for advantages and limitations.

4: Choose an algorithm that implies efficient calculations and implement ina programming language, suited for calculations.

CA301-T - Database Management System:

1: To understand database system, basic concepts, architecture, features,purpose, advantage of DBMS.

2: To learn about mponent of a DBMS: Users, facilities & structure.

3: To learning about data modeling & design.

4: To learn about entity-relationship data model.

5: To understand basics of relational model, normalization, relationalalgebra.

CA302-T - Mobile Maintenance -I:

1: To study basic electronics and microcomputers.

2: To enable learners to handle mobile phones with the knowledge of testingbatteries and battery charger.

3: To gain the knowledge of different mobile phones and also able to handleit.

4: To identify different chips and crystals on mobile PCB board.

5: To understand motherboard and different softwares for mobile repairing.

CA303-T - Principle of Management:

1: To understand basic concepts, spe, importance and evaluation ofmanagement.

2: To handle administrative section by applying work authority and responsibility.

3: To learn functions of management such as planning, organizing, staffingand so on.

4: To understand human factors in business administration and organization.

5: To enable learners to ntrol and ordinate with lleagues.

CA304-T -Programming in CPP:

1: To acquire an understanding of basic object oriented concepts and issuesinvolved in effective class design.

3: To write C^{++} programs that use object oriented concepts such as information hiding, construstors, destructors and inheritance.

CA305-T - Personality Development:

1: To develop and exhibit and accurate sense of self.

2: To develop and nurture a deep understanding of personal motivation.

3: To develop an understanding of practice of personal and professional responsibility.

4: To enhance self-nfidence.

5: To identify, understand, and apply ntemporary theories of leadershipto a wide range of situations and interactions.

6: To develop and articulate personal philosophy of leadership.

7: To understand concepts of democratic leadership and processes.

CA306-T -Statistical Method:

1: To prepare for mpetitive examinations.

2: To apply statistics in real life.

3: To understand and calculate various types of averages and variations.

4: To understand application of discrete & ntinuous probability distributions to various business problems.

5: To understand organization, management, and data presentation.

6: To carry out exercises and small projects inrporating data presentation.

CA307-P - Programming in C++ & aDBMS (LAB):

A student will able to …..

1: Use C++ functions and concepts related to good modular design.

2: Apply one-dimensional and two-dimensional arrays.

3: Use C++ structures.

4: Understand pointers and reference parameters.

5: Use text file input/output

6: Understand C++ classes.

7: Explain features of database management systems.

CA308P- Mobile Maintenance-I & SM using Excel (LAB):

A student will be able …..

1: To understand the basic internal structure of mobile phones.

2: To learn how to nnect the mobile chips and battery. **3:** To

explain different types of mobile phones with its IC's. **4:** To learn

applications and security issues of mobile phones.

5: To draw the different graphical representation of the raw data instatistical

method using excel.

6: To differentiate graphs.

.

CA401-T - Advance Database Management System:

1: Student will able to deal with database system using SQL to manipulatedata.

2: Understanding of physical storage of data.

3: Understanding of architecture of database system.

4: Learning about transaction processing and ncurrency ntrol.

CA402-T - Advance Mobile Repairing:

1: Student will understand of mobile phone technology.

2: Student will be familiarized with microchip and microprocessor technology.

3: Student will get practical training of handling various components of mobile phone.

4: Learning of circuit diagram of mobile phone with mplete software installation.

5: Student will be able to find the fault in hardware and software.

CA403-T - Software Project Management:

1: To manage selection and initiation of individual projects and of portfolios of projects in enterprise.

2: Implement processes for successful resource, mmunication, risk and change management.

3: To conduct project planning activities that accurately forecast project sts, timelines, and quality.

4: To demonstrate effective project execution and ntrol techniques that result in successful projects.

5: To conduct project closure activities and obtain formal project acceptance.

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CA404-T - Core Java

1: To implement object oriented programming concepts.

2: To use and create packages and interfaces in a Java program.

3: To use graphical user interface in Java programs.

4: To create applets.

5: To implement exception handling in Java.

6: To implement multithreading.

7: To use Input/output streams.

8: To handle security implementations in Java.

CA405-T - Aptitude and Logical Reasoning:

1: To prepare for mpetitive examinations.

2: To evaluate critically various real life situations by resorting to analysisof key issues and factors.

3: To read in between the lines and understand language structures.

4: To demonstrate principles involved in solving mathematical problemsand reducing the time taken for performing job functions.

100 CA406-T - Linear Programming Problem (LPP):1: To know the role of linear programming.

2: To understand applications of linear programming.

3: To define LPP and formulate the LPP in general and graphical form.

4: To understand methods of LPP.

5: To learn transportation and assignment problems using simple steps.

CA407-T - Programming in Java &Adv. DBMS using SQL (LAB):

A student will able to …..

1: Understand structure and model of Java programming language.

2: Use the Java programming language for various programming technologies.

3: Evaluate user requirements for software functionality required to decide whether the Java programming language can meet user requirements.

4: Propose the use of certain technologies by implementing in Java programming language to solve a given problem.

5: Choose an engineering approach to solve problems, starting from the acquired knowledge of programming and knowledge of operating systems.

6: Define database system concepts and apply normalization to the database.

7: Explain the basic processing and optimization techniques for high level query.

8: Describe different transaction processing concepts and use different ncurrency ntrol techniques.

9: Discuss different types of databases such as object oriented and distributed databases.

CA408-T - Mobile Maintenance-II & Mini project (LAB):

A student will able to….

1: Know various features of mobile phones.

2: Handle internal part of mobile.

3: Handle software's of mobile phones.

4: Formulate a real world problem and develop its requirements.

.Code: CA501-T - Software Project Management II:

1: To regnize, trace and resolve IT related crises using project management software.

2: To identify the impact of IT projects on the performance of organizations.

3: To manage the phases and infrastructure of IT projects.

4: To develop strategies to calculate risk factors involved in IT projects.

5: To use project management software to ntrol the design, implementation, closure, and evaluation of IT projects.

CA502-T - C o computer Graphics-I:

1: To learn basic concepts in computer graphics which includes differentinput-output devices and graphics file formats.

2: To use different functions of graphics for creating objects.

3: To be able to move an object from one place to another, rotate, scale,reflect the object easily.

4: To generate character / alphabets using various methods.

CA503-T- Core Java-II:

1: To understand input/output stream used in java.

2: To learn different utilities in java language.

3: To have an overview of database access and details for managing information using JDBC API.

4: To enable learners to write simple GUI interfaces for a computer program, to interact with users, and understand event-based GUIhandling principles.

5: To learn use of Java applets for creating interactive web programs: Fonts, lor, graphics, and animation.

CA504-T- Data Warehousing:

1: To evaluate models of OLAP and data pre-processing.

2: To enlist algorithms used in information analysis of data mining techniques.

3: To demonstrate the knowledge retrieved through solving problems.

CA506-T - Data mmunication & Networks

1: To understand types of networks, technologies and applications ofnetworks.

2: To understand types of addresses and data handling.

3: To understand networking models, protols and functionality of eachlayer.

4: To learn basics of networking hardware and tools.

5: To understand wired and wireless networks, their types, functionality oflayer.

Course Code: CA507-T- Beginners Programming with PHP 1: To understand server-side programming works on the web.

2: To learn PHP Basic syntax for variable types and calculations.

3: To create nditional structures.

4: To store data in arrays.

5: To use PHP built-in functions for creating custom functions.

CA509-P - Pr. Based on mp. Graphics & Pr. Based on re Java-II (LAB):1: To study and make an object based on graphical functions.

2: To learn drawing of different shapes using various algorithms.

3: To handle various movements of an object for animation - translate,rotate, scaling and reflection.

4: To understand input/output stream in Java.

5: To learn utilities in Java language.

6: To have an overview of database access and details for managinginformation using the JDBC API.

7: To write simple GUI interfaces for a computer program, interact withusers, and understand the event-based GUI handling principles.

CA510-P -Pr. Based on DCN & Pr. Based on PHP (LAB):1:

To describe standard network models.

2: To understand guided transmission media.

3: To analyze error detection and error rrection des.

4: To understand the concepts behind medium access ntrol sub layer.

5: To understand working of server-side programming on the web.

6: To learn PHP basic syntax for variable types and calculations.

7: To create nditional structures.

8: To store data in arrays.

9: To use PHP built-in functions and creating custom functions.

CA601-T - Software Testing and Quality Assurance:

1: Students will be able to identify benefits and the needs to enforcesoftware quality.

2: Students will be able to differentiate between quality ntrol, qualitymanagement and quality assurance.

3: Students will be able to discuss different software quality factors models.

4: Students learn systematic approach to the development, operation,maintenance, and retirement of software.

5: To understand methods and tools of testing and maintenance of software's.

CA602-T - C o computer Graphics-II

1: Student will understand three dimensional (3-D) basic concepts.

2: Students will be able to perform different operations on an object such as3D- rotation, scaling and translation.

3: Students can clip objects using different methods/algorithms.

4: To understand curves and fractals ncept.

5: To enable students to identify and describe different lor models fordefining an object.

CA603-T- Java Server Pages (JSP)

1: Students will understand Java server pages by its life cycle.

2: Students can learn different scripting tags.

3: Students can understand different tags helpful to the server pages suchas
directive tags, action tags and also depth knowledge of Java Beans.

4: To handle database access to JSP page.

5: To understand JSTL, re and XML tag library.

Code: CA604-T - Data Mining:

1: To build basic terminology.

2: To display a mprehensive understanding of different data mining tasksand the
algorithms most appropriate for addressing them.

3: To evaluate models/algorithms with respect to accuracy.

4: To demonstrate capacity to perform a self-directed piece of practical workthat
requires the application of data mining techniques.

5: To analyze critically the results of data mining exercise.

6: To develop hypotheses based on the analysis of results and test them.

7: To understand a data mining solution to a practical problem.

CA606-T - Cloud C o mputing:

1: Students can learn cloud mputing fundamentals with cloud services.

2: Students can learn different cloud mputing technologies and their applications.

3: Students can understand key enabling technologies for virtual private clouds and
their applications.

4: Students can understand different role of networks in cloud computing.

5: Students can learn architecture of cloud and data-intensive technologies along
with their characteristics and system architecture for cloud mputing.

Course Code: CA607-T - Advanced Programming with PHP:

1: To maintain state using okies, session variables, hidden form fieldsand query strings.

2: To use PHP to manipulate files.

3: To identify and handle errors that can occur while programming withPHP.

4: To introduce to OOP (Object Oriented Programming) in PHP.

5: To understand use of an object-oriented API to access SQL to SELECT, INSERT, UPDATE and DELETE data from tables.

6: To use phpMyAdmin utility to administer the MySQL database.

7: To use OOP in PHP to define and use classes.

Code: CA609-P - Pr. Based on PHP & JSP (LAB)

1: To identify and handle the types of errors that can occur while programming with PHP.

2: To introduce learners to OOP (Object Oriented Programming) in PHP.

3: To use an object-oriented API to access SQL to SELECT, INSERT, UPDATE and DELETE data from tables.

4: To use php MyAdmin utility to administer the MySQL database.

5: To use OOP in PHP to define and use classes.

6: To choose an engineering approach to solve problems, starting from the acquired knowledge of programming and knowledge of operatingsystems.

CA610P - Major Project:

1: To formulate a real world problem and develop its requirements.

2: To develop a design solution for a set of requirements.

3: To test and validate nformance of the developed prototype against theoriginal requirements of a problem.

4: To work as a responsible member and a leader of a team in developingsoftware solutions.

5: To express technical, behavioral ideas and thought in oral settings.

6: To participate in and possibly moderate, discussions that lead to make decisions.

Course Outcomes

Cos : B.Sc. Cocomputer Science

B.Sc. [CS] Semester-I CS101-T -Cocomputer Fundamentals:1:

To introduce learners to computers.

2: To write algorithms and draw flowcharts which are the first step towardsthe computer programming.

3: Students will understand history of computers.

4: Students will learn different programming languages.

5: Students will be introduced with memory and storage devices.

6: Students will understand input and output devices.

CS102-T - Digital Electronics:

1: Students will understand computer number system, arithmetic operations, Boolean algebra and logic gates.

2: Students will learn K-maps and mbinational and arithmetic logiccircuits.

3: Students will understand flip-flops, unters, registers, their types andtheir functions.

CS103-T - Microprocessor:

Learners will be able …..

1: To understand microprocessors, microcomputers and 8086 hardware specifications.

2: To learn the working of 8086 microprocessor.

3: To learn addressing modes of 8086.

4: To learn iconstrustion set and write programs on 8086 kit.

CS104-T - 'C' Programming - I:

1: Students will be introduced to C-programming language.

2: Students can use C-character set, basic elements and operators used inC-programming.

3: Students will learn the data types of C and input/output statements.

4: Students will be able to write the programs using C-language.

5: Students can use programs and array.

CS105-T - Communication Skill –1:

1: To enhance mmunication skills of students.

2: Students can apply types and methods of mmunication.

3: Students will able to mmunicate in English properly.

4: Students will learn English grammar and vocabulary.

5: Students will be able to express speeches and presentations in English.

6: To acquaint practice to read, write and speak in English.

CS106-T - Mathematical Foundation:

1: Students will learn set theory useful for higher studies.

2: Students will learn graph theory.

3: Students will understand different binary relations and functions.

4: Students will learn Boolean algebra.

CS107-P - Practical based on Office Suite:

1: To use basic cocomputer operations.

2: To use internet.

3: To demonstrate the mechanics and uses of Word tables to organize andpresent data.

4: To demonstrate working knowledge of Word's themes and clip art.

5: To demonstrate Word's advanced formatting techniques and presentationof styles.

6: To demonstrate accepted business style formatting nventions.

7: To create documents using Microsoft word in writing applications, lettersand office use.

CS108-P - Practical based on Digital electronics:

1: To express use of analog signals to represent digital values in logicfamilies, including characterization of the noise margins.

2: To create appropriate truth table from a description of a mbinationallogic function.

3: To create a gate-level implementation of a mbinational logic function described by a truth table using and/or/in gates.

4: To evaluate mbinational and sequential logic designs using metrics.

CS109-P - Practical based on Micro Processor - I:

A student will be able to …..

1: Understand Intel-8086 microprocessor architecture and real mode memory addressing.

2: Apply Intel microprocessor addressing modes.

3: Assemble language programming and debugging.

4: Perform arithmetic calculations using 8086 microprocessor kit.

5: Transfer and exchange data among memory units.

CS110-P- Practical based on 'C' Programming:

1: To understand the fundamentals of C programming.

2: To choose loops and decision making statements for solving problems.

3: To implement different operations on arrays.

4: To understand the basic mathematical calculations.

B.Sc. [CS] Semester-II CS201-T- Data Structure:

1: Students will understand basics of data structure.

2: Students will learn the use of arrays in data structure.

3: Students will understand working of linked list, stacks and queues.

CS202-T- Operating System:

1: Students will learn the working of operating system.

2: Students can processes and manage operating systems.

3: Students can understand storage and device management.

4: Students can handle file structure managed by operating system.

CS203-T-Micro Processor - II:

1: Students will learn the logic and ntrol iconstrustions of 8086.

2: Students will be familiarized to modular programming, assembler, linkerand macros.

3: Students will understand interrupts, their types, DMA and DMA ntrolI/O.

CS204-T- 'C' Programming - II

1: Students can write user defined functions.

2: Students will be able to use structures and union within C-programs.

3: Students will able to use pointers within program to access the computermemory location directly.

4: Students will learn to use preprocessor directives and miscellaneousfeatures.

5: Students will be able to work on files using C-programs.

CS205-T- Communication Skill-II

1: Apply mmunication skills to write letters, notices, minutes, manual,leaflet, mplaints & suggestion and job application.

2: Write reports.

3: Discuss in groups and enhance mmunication skills.

4: Write CV for interview.

5: Prepare for interview.

CS206-T - Numerical Computation Methods:

1: Students will understand types of errors in mathematics.

2: Students can understand the matrix and determinants.

3: Students can understand the roots of linear and nonlinear equations.

4: To learn interpolation and regression methods.

CS207-P-Practical based on Data Structure:

1: To understand the ncept of dynamic memory management, data types,algorithms and big O notation.

2: to understand the basic data structures.

3: To describe the hash function, concepts of llision & resolution methods.

4: To solve problem involving graphs, trees and heaps.

5: To apply algorithm for solving problems.

CS208-P-Practical based on Micro Processor - II:

1: Students will learn to implement arithmetic operations on 8-bit numbers.

2: Students will learn to write 8086 program to find smallest/largestnumber.

3: Students will learn to write 8086 program for sum of array elements,reverse of

array elements.

4: Students can design programs over 8086.

CS209-P- Practical based on C Programming-II:

After studying the urse, a student will be able to ….

1: Implement programs with pointers, arrays, perform pointer arithmetic,and use the pre-processor.

2: Write programs that perform operations using derived data types.

3: Use pointers and user defined data types.

4: Use functions used in C-language.

CS210-P- Practical based on Numerical mputational Method:

A student will be able to….

1: Identify mathematical problems and reformulate them with appropriatenumerical treatment.

2: Choose appropriate numerical method for treatment of a given problem.

3: Explain choice of method by acunting for advantages and limitations.

4: Choose an algorithm that implies efficient calculations and implement in programming language, suited for calculations.

5: Estimate the reliability of results.

B.Sc.[CS] Semester-III Advance Data Structure (CS301-T)1:

Students can use graph theory.

2: Students can understand sorting techniques.

3: Students can apply searching techniques.

Unix Operating System (CS302-T)

1: Students will be able to understand UNIX operating system.

2: Students will learn the basic mmands to work on UNIX operatingsystem.

3: Students can create and use files on UNIX operating system.

4: Students can learn shell script in programming on UNIX.

110 PC Maintenance (CS303-T)

1: Students will learn computer hardware and its maintenance.

2: Students will learn s/w installations for PC and its settings.

3: Students will understand networking, settings and antivirus installation.

4: Students will understand laptop and its components.

Programming in CPP (CS304-T)

1: To acquire basic object oriented concepts in oriented programming for software development.

2: To learn history, structure of C^{++} language and functions in C^{++}.

3: To learn use of class, object and friend function.

4: To apply programming in C^{++} to solve the real world problem using class and objects.

Database management System (CS305-T)

1: To understand database, architecture, features, purpose and advantagesof DBMS.

2: To understand components of a DBMS: Users, facilities & structure.

3: To learn data modeling & design.

4: To learn entity-relationship data model.

5: To understand the basics of relational model, normalization, relational algebra.

6: To introduce to oracle s/w.

Statistical methods (CS306-T)

1: To enable learners for mpetitive examinations.

2: To apply statistics in real life.

3: To understand and calculate types of averages and variations.

4: To apply discrete and ntinuous probability distributions in businessproblems.

5: To organize, manage, and present data.

6: To exercise small projects that inrporate data presentation.

Practical based on data structure using CPP. (CS307-P)

1: To apply sorting techniques using C-language.

2: To apply searching techniques using C-language.

Practical based on DBMS (CS307-P)

1: To explain the features of database management systems.

2: To draw a scheme for their database.

3: To design nceptual models of a database using ER modeling.

4: To understand basics of relational model, normalization, relationalalgebra.

Practical based on PC Maintenance (CS308-P)

1: To understand computer hardware and motherboard. **2:** To learn

nnecting of input, output and storage devices.**3:** To understand

installation of software on PC.

4: To learn formatting of hard disk and creating partitions on HD.

5: To study installation of device drivers and antivirus.

Practical based on UNIX (CS308-P)

1: To understand working with UNIX Operating System (OS).

2: To execute mmands of UNIX OS.

3: To create and access files on UNIX OS.

4: To write and execute shell script for UNIX OS to get the desired result.

B.Sc. [CS] Semester-IV Software Engineering (CS401-T)1:

To understand software development process.

2: To learn different types of s/w.

3: To study different models of s/w.

Fedora (CS402-T)

1: Introduction to fedora operating system.

2: Understanding of basic mmands of Linux and fedora installation.

3: Understanding of software package administration, user and group
administration.

4: Learning file system and file permissions.

Basics of Networking (CS403-T)

1: Learn networks, topologies and applications of networks.

2: Learn types of transmission media used in data mmunication.

3: Introduction to mobile telephone system, generations and its working.

Core Java (CS404-T)

1: To implement object oriented programming concepts.

2: To study inheritance and interfaces.

3: To study packages.

4: To create package in java.

5: To implement exception handling in Java.

Implement Multithreading: Adv. DBMS (CS405-T)

Student will be able to ….

1: Deal with database system using SQL to manipulate data.

2: Extract information on physical storage of data.

3: Architect database system.

4: Learn transaction processing and ncurrency ntrol.

Web Fundamental (CS406-T)

Students will be able …..

1: To understand HTML, XHTML, HTML5 and its elements.

2: To create static web pages.

3: To de program in web page.

4: To create dynamic web pages.

5: To study CSS3 for designing web page.

6: To design web pages using cascaded style sheets.

Practical based on Java in fedora OS (CS407-P):

1: To understand structure and model of Java programming language.

2: To use Java programming language.

3: To evaluate and analyze user requirements for software functionality.

4: To propose the use of certain technologies by implementing in Javaprogramming language to solve problems.

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Practical based on Web Fundamentals (CS407-P)

1: To understand higher level of HTML, CSS using HTML5 and CSS3.

2: To validate web pages/ web sites as per requirement.

3: To develop HTML forms and different attributes.

4: To work with drag and drop event handling.

5: To use JavaScript in HTML.

Practical based on Adv. DBMS and N/W (CS408-P)

1: To define database system concepts and apply normalization to thedatabase.

2: To explain basic processing and optimization techniques for high levelquery.

3: To describe transaction processing concepts and use different ncurrency ntrol techniques.

4: To discuss databases such as object oriented and distributed databases.

Practical based on Mini Project (CS408-P)

1: To formulate a real world problem and develop its requirements.

2: To develop a design solution for a set of requirements.

3: To test and validate nformance of developed prototype against therequirements of the problem.

4: To work as a responsible member and possibly a leader of a team indeveloping software solutions.

B.Sc. [CS] Semester-V Software st Estimation (CS501-T)

1: To learn software planning process, software spe and feasibility, typesof resources, project estimation.

2: To study documentation techniques.

3: To study estimation of models.

Basic of Android O. S. (CS502-T)

1: To study environmental setup for android development.

2: To understand application components used in android development.

3: To learn the basic components of an android application.

4: To study resource organization, filters and user interface ntrols.

5: To understand event handling in android.

6: To describe the basics of graphics and multimedia support in android.

Core Java-II (CS503-T):

1: To understand input/output system in java.

2: To understand utilities in java language.

3: To provide an overview of database access and details of managinginformation using the JDBC API.

4: To learn use of Java applets to create interactive web programs: Fonts,lor, graphics, and animation.

Basic of computer Graphics (CS504-T)

1: To understand basic concepts of computer graphics.

2: To create graphics using C-programming.

3: To perform 2D transformation.

4: To create algorithms.

5: To apply character generation techniques.

Beginners Programme with PHP (CS505-T)1:

Introduction to PHP.

2: To understand working of server-side programming on the web.

3: To use PHP basic syntax for variable, data types, operators andexpressions and nstant.

4: To create nditional structures.

5: To store data in arrays.

Advanced Networking (CS508-T)

1: To understand OSI reference model.

2: To study data link layer, data link ntrols and protols.

3: To understand network layer and its protols.

4: To study transport layer and application layer.

Pr. Based on Adv. Java (CS509P -A)

1: To learn input/output stream used in java.

2: To learn utilities in java language.

3: To provide an overview of database access and details for managinginformation using the JDBC API.

Practical Based on computer Graphics (CS509P -B)

1: Students can understand graphical functions of C-Language.

2: Students can perform 2D transformation, translation, scaling, androtation of 2D object using C-Language.

3: Students can implement algorithms to draw line and circle.

Practical Based on Android O.S. (CS510P -A)1:

To appreciate mobility landscape.

2: To design and develop mobile apps, using android as developmentplatform, with key focus on user experience design.

3: To understand native data handling and background tasks and notifications.

Practical Based on PHP (CS510P -B)

1: PHP basic syntax for variable types and calculations.

2: To create nditional structures.

3: To store data in arrays.

4: To use PHP built-in functions and create custom functions.

B.Sc. [CS] Semester-VI Software Quality & Testing (CS601-T)

1: To understand software quality concepts.

2: To understand quality assurance.

3: To understand software testing strategies, verifications and validations.

4: To validate nventional applications.

Android Application Development (CS602-T)

1: To familiarize learners with android development tools.

2: To apply advanced features of Android SDK.

3: To develop android apps with different tools.

4: To use location services APIs to get information about device location, receive periodic location updates, and turn geographic ordinates into physical addresses.

5: To integrate Google maps into apps and use features such as location markers, map styling, street view, and location tracking..

Theory of Computation (CS603-T)

1: To study sets, relations, functions, graphs, trees and mathematical iconductions.

2: To study regular expressions.

3: To learn finite automate, NFA and DFA.

4: To learn formal languages, classification of languages, their relation and automaton.

5: To understand programming languages.

Advanced cocomputer Graphics (CS604-T)1:

1. To understand 3D transformations.

2: To create curves and fractals.

3: To understand basics of lor models.

4: To create animations.

Advanced Programming with PHP (CS605-T)

1: To handle HTML forms in PHP.

2: To maintain state using okies, session variables, hidden form fieldsand query strings.

3: To use PHP to manipulate files.

4: To use database in PHP.

5: to use an object-oriented API to access SQL to SELECT, INSERT,UPDATE and DELETE data from tables.

6: To use MySQL functions.

Ethics and Cyber Law (CS608-T)

1: To understand the of spe of cyber laws, cyber jurisprudence and digitalntracts.

2: To identify intellectual property right issues in the cyberspace and design strategies to protect intellectual property.

3: To describe laws governing cyberspace and analyze the role of internetgovernance in framing policies for internet security.

4: To understand cybercrimes and analyze legal frameworks of differentuntries to deal with these cybercrimes.

5: To explain the importance of jurisdictional boundaries and identify the measures to overme cross jurisdictional cybercrimes.

Study of Information Technology Act 2000 Cyber Law Practical Based onAndroid Development (CS609 P -A)

1: To understand advanced features of Android SDK.

2: To familiarize with android development tools.

3: To develop android apps.

4: To use location services of APIs to get information about device location, receive periodic location updates, and turn geographic ordinates into physical addresses.

5: To integrate Google Maps into apps and use features such as location markers, map styling, Street View, and location tracking.

6: To understand messaging services used by android apps.

Practical Based on PHP (CS609 P -B)

1: To identify and handle types of errors while working with PHP.

2: To introduce Object Oriented Programming.

3: To understand the use of object-oriented API, SELECT, INSERT, UPDATEand DELETE data from tables.

4: To use MySQL database.

5: To use OOP in PHP to define and use classes.

6: To choose an engineering approach to solve problems, starting from theacquired knowledge of programming and operating systems.

Major Project (CS610P)

1: To formulate a real world problem and develop its requirements.

2: To develop a design solution for a set of requirements.

3: To test and validate the nformance of the developed prototype againstthe original requirements of a problem.

4: To work as a responsible member and a leader of a team in developingsoftware solutions.

5: To express technical and behavioral ideas and thoughts in oral settings.

6: To participate in and possibly moderate, discussions that lead to making decisions.

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Programming in C –I (urse de: IT104-T) 1: To

understand programming languages. **2:** To adopt

problem solving techniques.

3: To write programs in C and to solve the problems.

4: To read, understand and trace the execution of programs in C language.

5: To write the C de for a given algorithm.

Communication Skill (urse de: IT106-T)

1: To demonstrate preparation and research skills for oral presentations.

2: To develop proper listening skills.

3: To articulate and enunciate words and sentences clearly and efficiently.

4: To show nfidence and clarity in public speaking projects.

5: To demonstrate ability to gather information and apply it to persuade orarticulate one's own point of view.

Written mmunication

1: To understand the rules of spelling and grammar.

2: To read, analyze text and be able to summarize ideas in writing.

3: To organize thoughts in a manner that emphasizes flow and paragraph development.

Mathematical Foundation (Course Code: IT106-T)

1: To distinguish between statement logic and predicate logic.

2: To visualize data numerically and/or graphically.

3: To evaluate mathematical principles and logic design.

4: To apply iconduction and other proof techniques towards solving recurrences and related problems in elementary algebra, design elementary deterministic and randomized algorithms to solve mputational problems.

5: To illustrate basic terminology of functions, relations, sets and demonstrate knowledge of their associated operations in mathematical modeling.

Office Suite Practical (LAB) (Course Code: IT107P)

A student will be able to …..

1: Demonstrate the mechanics and uses of word tables to organize andpresent data.

2: Demonstrate working knowledge of using Word's themes and clip art tocreate a variety of visual effects.

3: Demonstrate working knowledge of Word's advanced formatting techniques and presentation styles.

4: Demonstrate applicable knowledge and uses of accepted business style formatting nventions.

5: To create and design a spreadsheet for general office use.

6: To demonstrate the basic mechanics of creating a Power PointPresentation.

Digital Electronics Practical (LAB) Course Code:

1: To understand use of analog signals for presenting digital values indifferent logic families, including characterization of the noise margins.

2: To create appropriate truth table from a description of a mbinationallogic function.

3: To create a gate-level implementation of a mbinational logic function described by a truth table using and/or/inv gates.

4: To evaluate mbinational and sequential logic designs using metrics.

Microprocessor-I (8086) Practical (LAB)Course Code: IT109P

A student will be able to understand ….

1: Intel 8086 microprocessor architecture and real mode memory addressing.

2: Intel microprocessor addressing modes.

3: Assembly language programming and debugging.

4: Arithmetic calculations using 8086 microprocessor kit.

5: Transfer of data and exchange of data between various memory units.

C Programming-I Practical (LAB) Course Code: IT109P

A student will be able to ……

1: To understand the fundamentals of C-programming.

2: To choose the loops and decision making statements for solving problems.

3: To apply operations on arrays.

4: To understand the basic mathematical calculations.

B.Sc. (I.T.)-II nd Semester Data Structures: Course Code: IT201-T

1: Students can choose appropriate data structure as applied to specifiedproblem definition.

2: Student can handle operations such as searching, insertion, deletion,traversing mechanism etc.

3: Students will be able to apply concepts.

4: Students will be able to use linear and non-linear data structures suchas stacks, queues, linked list etc.

Operating System: Course Code: IT202-T

1: To understand master functions, structures and history of operatingsystems.

2: To learn design issues associated with operating systems.

3: To understand process management concepts including scheduling, synchronization, and deadlocks.

4: To familiarize learners with multithreading.

5: To learn master concepts of memory management including virtualmemory.

6: To study master system resources sharing among the users.

7: To learn issues related to file system interface and implementation, disk management.

I.T. Tools & Web Designing –I: Course Code: IT203-T1:

To learn basics of internet and web designing.

2: To understand architecture of browser, server, web page, web sites &clients.

3: To understand internet domains, protols and browser and servermmunication.

4: To understand HTML and DTML language for web page development.

5: To understand concepts of internet programming using JavaScript.

C-Programming-II: Course Code: IT204-T

1: To create user defined functions for specific task in C-language.

2: To understand the functions.

3: To understand use of user defined data types such as structures &unions.

4: To deal with memory using pointers.

5: To understand library functions and storage classes in C-language.

Communication Skill –II: Course Code: IT205-T

1: To enhance research skills for oral presentations.

2: To develop proper listening skills.

3: To articulate and enunciate words and sentences clearly and efficiently.

4: To enhance nfidence and clarity in public speaking projects.

5: To demonstrate ability to gather information and apply.

Goal Two: Written Communication

1: To understand grammar.

2: To read, analyze text and enable leaners to summarize ideas in writing.

3: To organize thoughts with emphasis on paragraph development.

4: To learn proper footnoting and bibliography skills.

5: To understand writing techniques and styles based on the mmunication medium.

6: To develop group discussion and mmunication skill.

7: To develop listening mprehension, reading mprehension and vocabulary.

Numerical Methods: Course Code: IT206-T

1: To demonstrate mmon numerical methods.

2: To apply numerical methods for obtaining approximate solutions to mathematical problems.

3: To study numerical methods for various mathematical operations and tasks, such as interpolation, differentiation, integration, solution of linear and nonlinear equations, and the solution of differential equations.

4: To analyze and evaluate the accuracy of mmon numerical methods.

Data Structure (LAB) (Course Code: IT207P)

A student will be able to ….

1: Understand the ncept of dynamic memory management, data types, algorithms, big O notation.

2: Understand basic data structures such as arrays, linked lists, stacks and queues.

3: Describe the hash function and concepts of llision and its resolution methods.

4: Solve problem involving graphs, trees and heaps.

5: Apply algorithm for solving problems like sorting, searching, insertion and deletion of data.

I.T. Tools & Web Designing – I (LAB) (Course Code: IT208P)

A student will be able to ….

1: Explain the history of the internet and related internet concepts that are vital in understanding web development.

2: Discuss insights of internet programming and implement mplete application over the web.

3: Demonstrate the importance of HTML tags for designing static pages and separate design from ntent using cascading style sheet.

C Programming - II (LAB) (Course Code: IT209P)

A student will be able to ….

1: Implement programs with pointers, arrays, arithmetic, and use the pre-processor.

2: Write programs that perform operations using derived data types.

3: Use pointers and user defined data types.

4: Use functions in C-language.

Numerical Method (LAB) (Course Code: IT210P)

A student will be able to….

1: Identify different mathematical problems and reformulate them in a way that is appropriate for numerical treatment.

2: Choose appropriate numerical method for treatment of the given problem.

3: Explain choice of method by acunting for advantages and limitations.

4: Choose an algorithm that implies efficient calculations and implement it in a programming language, suited for calculations.

5: Estimate the reliability of the results.

6: Use functions from the programming language library for efficient calculations and visualization.

7: Apply computer science for the solution of practical problems.

Database Management System (Course Code IT301-T):

1: To understand the basic concepts of database management system, architecture, features, purpose and advantage of DBMS.

2: To learning about components of a DBMS: Users, facilities & structure.

3: To understand Data Modeling & Design.

4: To understand entity-relationship data model.

5: To understand basics of relational model, normalization and relational algebra.

6: To understand the basics of oracle s/w.

Android - I (Course Code: IT302-T):

1: To understand environmental setup for android development. **2:** To study application components used in android development.**3:** To describe basic components of an Android application.

4: To define lifecycle methods of android application components.

5: To describe the basics of event handling in android.

6: To describe the basics of graphics and multimedia support in android.

7: To demonstrate basic skills of using an integrated development environment (android studio) and android software development kit for implementing Android applications.

I.T. Tools & Web Designing-II (Course Code: IT303-T):

After mpleting the urse….

1: Student will understand use of higher level of HTML, CSS with the help of HTML5 and CSS3.

2: Student can validate web pages/ web sites as per requirement.

3: Student can develop web applications using HTML and different attributes.

4: Students can work with drag and drop event handling.

5: Students can add effects using different functions for web page using J-Query.

Programming in CPP (Course Code: IT304-T):

1: To acquire an understanding of basic object oriented concepts and the issues involved in effective class design.

2: To write C^{++} programs that use object oriented concepts such as information hiding, construstors, destructors, inheritance etc.

Personality Development (Course Code: IT305-T):

1: To develop, exhibit and accurate sense of self.

2: To develop and nurture a deep understanding of personal motivation.

3: To develop an understanding of practice personal and professional responsibility.

4: To enhance nfidence.

5: To identify, understand, and apply ntemporary theories of leadershipto a wide range of situations and interactions.

6: To develop and articulate a personal philosophy of leadership.

7: To understand concepts of democratic leadership and processes.

Statistical Method Course Code: IT306-T):

1: To prepare for mpetitive examinations.

2: To know application of statistics in real life.

3: To understand and calculate averages and variations.

4: To apply discrete and ntinuous probability distributions to variousbusiness problems.

5: To organize, manage and present data.

Programming in C++ & DBMS (LAB) (Course Code IT307P):

1: To familiarize learners with C++ functions and the concepts related to good modular design.

2: To familiarize learners with one-dimensional and two-dimensional arrays.

3: To familiarize learners with C++ structures.

4: To familiarize with using pointers and reference parameters.

5: To familiarize with text file input/output.

Android-T & I.T. Tools & Web Design-II (LAB) (Course Code IT308P):

1: Students will be able to appreciate mobility landscape.

2: Students will be able to design and develop mobile apps, using androidas development platform, with key focus on user experience design.

3: Students will be able to deal with native data handling and backgroundtasks

and notifications.

4: Students will be able to appreciate nuances such as native hardwareplay, location awareness, graphics, and multimedia.

6: Students can use HTML 5 forms, validations, API's and different attributes.

Advance Database Management System (Course Code: IT401-T):

1: To deal with database system using SQL.

2: To understand physical storage of data.

3: To understand architecture of database system.

4: To understand transaction processing and ncurrency ntrol.

Advanced Android Application Development (Course Code: IT402-T):

Students will be able to understand and apply….

1: Advanced features of android SDK.

2: Android Development Tools.

3: Android apps with different tools.

4: Use of Location Services APIs.

5: Use of integrated Google maps into apps.

6: Messaging services in android apps.

I.T. Tools & Web Designing- III (Course Code: IT403-T):

1: Understanding of programming for web development.

2: Use of static and dynamic web pages and databases for web sites.

3: Learning about VB scripts language.

4: Learning about HTML forms and ntrols.

5: Use okies and database into web applications.

Core Java-I (Course Code: IT404-T):

1: To implement object oriented programming concepts.

2: To use and create packages and interfaces in a Java program.

3: To use graphical user interface in Java programs.

4: To create applets.

5: To implement exception handling in Java.

6: To implement multithreading.

7: To use input/output streams.

8: To handle security implementations in Java.

Aptitude and Logical Reasoning Course Code: IT405-T

1: To enable leaners mpatible for mpetitive examinations.

2: To evaluate various real life situations by resorting to analysis of keyfactors and issues.

3: To read in between the lines and understand various language structures.

4: To demonstrate principles involved in solving mathematical problemsand thereby reducing the time taken for performing job functions.

Software Project Management (Course Code: IT406-T):

1: To manage the selection and initiation of individual projects andportfolios of projects in the enterprise.

2: To conduct project planning activities those accurately forecast projectsts, timelines, and quality.

3: To demonstrate effective project execution and ntrol techniques thatresult in successful projects.

4: To conduct project closure activities and obtain formal project acceptance.

5: To demonstrate a strong working knowledge of ethics and professional responsibility.

Programming in Java &Adv. DBMS using SQL (LAB) (Course Code: IT407-T):

A student will able to ….

1: Understand the structure and model of Java programming language.

2: Use Java programming language for various programming technologies.

3: Evaluate user requirements for software functionality required to decide whether the Java programming language can meet user requirements.

4: Propose the use of certain technologies by implementing them in the Java programming language to solve the given problem.

5: Choose an engineering approach for solving problems, starting from the acquired knowledge of programming and knowledge of operatingsystems.

6: Define database system concepts and apply normalization to the database.

7: Explain the basic processing and optimization techniques for high level query.

8: Describe different transaction processing concepts and use different ncurrency ntrol techniques.

9: Discuss different types of databases such as object oriented and distributed databases.

128 Adv. Android & Mini project (LAB) (Course Code: IT408-T):

A student will able to …..

1: Understand advanced features of android SDK.

2: Familiarize with android development tools.

3: Develop android apps with different tools.

4: Use location services APIs to get information about device location, receive periodic location updates, and turn geographic ordinates into physical addresses.

5: Learn integrated use of Google Maps into your apps and use features like location markers, map styling, Street View, and location tracking.

6: Learn about messaging services used by android apps.

7: Formulate a real world problem and develop its requirements.

8: Develop a design solution for a set of requirements.

9: Test and validate nformance of developed prototype against the original requirements.

10: Work as a responsible member and as a leader of a team in developingsoftware solutions.

Software Project Management II (Course Code: IT501-T):

1: Regnize, trace and resolve IT related crises using project managementsoftware.

2: Identify the impact of IT projects on the performance of the organizations.

3: Manage the phases and infrastructure of IT projects.

4: Develop strategies to calculate risk factors involved in IT projects.

5: Use project management software to ntrol the design, implementation,closure, and evaluation of IT projects.

Data Communication & Networks (Course Code: IT502-T):

1: Understand networks, topologies and application of networks.

2: Understand types of addresses and data mmunication.

3: Understand networking models, protols and their functions.

4: Understand networking hardware and tools.

5: Understand wired and wireless networks, their types and functionality oflayer.

Beginners Programming with PHP (Course Code: IT503-T):

1: Understand working of server-side programming on web.

2: Understand PHP basic syntax for variable types and calculations.

3: Creating nditional structures.

4: Storing data in arrays.

5: Using PHP built-in functions and creating custom functions.

Ethical Hacking (Course Code: IT504-T):

1: To describe the concepts of ethical hacking.

2: To understand the stages of a cyber-attack.

3: To describe and perform basic rennaissance exercises.

4: To scan and enumerate a network and computer systems.

5: To understand types of malware and cyber-attack vectors and players.

6: To execute basic attacks against network and computer systems.

Data Warehousing (Course Code: IT505-T)

1: To evaluate the different models of OLAP and data preprocessing.

2: To apply algorithms used in information analysis of data mining techniques.

3: To enhance problem solving skills.

Core Java-II (Course Code: IT507-T):

1: To understand input/output stream used in Java.

2: To learn utilities in Java language.

3: To provide an overview of database access and details for managing information using the JDBC API.

4: To write simple GUI interfaces for a computer program to interact withusers, and to understand event-based GUI handling principles.

5: To learn use of Java applets for creating interactive web programs: Fonts,lor, graphics, and animation.

Pr. Based on DCN & Pr. Based on PHP (LAB) (Course Code: IT509-P):

Learners will be able to….

1: Describe standard network models.

2: Understand guided transmission media.

3: Analyze error detection and error rrection des.

4: Understand the concepts behind medium access ntrol sub layer.

5: Understand working of server-side programming on web.

6: Understand PHP basic syntax for variable types and calculations.

7: Create nditional structures.

8: Store data in arrays.

9: Use PHP built-in functions and creating custom functions.

Pr. Based on Data Warehouse & Pr. Based on re Java-II (LAB): Course

Code: IT510-P

1: To evaluate models of OLAP and data pre-processing.

2: To enlist algorithms used in information analysis of data mining techniques.

3: To demonstrate the knowledge retrieved through problems solving.

4: To understand input/output Stream used in Java.

5: To learn utilities in Java language.

6: To provide an overview of database access and details for managing information using the JDBC API.

7: To write up simple GUI interfaces for a computer program to interact with users, and to understand the event-based GUI handling principles.

Software Testing and Quality Assurance -Course Code: IT601-T:

1: Learner will be able to identify benefits and the needs to enforce software quality.

2: Learner will be able to differentiate between quality ntrol, quality management and quality assurance.

3: Learner will be able to discuss software quality factor models.

4: Learners can acquire systematic approach to the operation, maintenance and development of software.

5: Learner can understand tools of testing and maintenance of softwares.

6: Student can learn use of available resources to develop software, reducest of software and maintaining the quality of software.

Wireless Networking - Course Code: IT602-T

Students will be able to……

1: Identify the basic concepts of wireless networks.

2: Analyze traffic theories, mobile radio propagation, channel ding, andcellular concepts.

3: compare and contrast multiple division techniques, mobile mmunication systems, and existing wireless networks.

4: Classify network protols, sensor networks, wireless MANs, LANs andPANs.

5: Apply wireless ID technologies, in particular RFID work.

Advanced Programming with PHP - Course Code IT603-T

1: Maintaining state using okies, session variables, hidden form fieldsand query strings.

2: Using PHP to manipulate files.

3: Identifying and handling the types of errors that can occur whileprogramming with PHP.

4: Understanding of object oriented programming in PHP

5: Use of an object-oriented API to access SQL to SELECT, INSERT, UPDATE and DELETE data from tables.

6: Using the phpMyAdmin utility to administer the MySQL database.

7: Using OOP in PHP to define and use classes.

Cyber Law and Security- Course Code: IT604-T

Learners will be able to ….

1: Describe laws governing cyberspace and analyze the role of internet governance in framing policies for internet security.

2: Discuss different types of cybercrimes and analyze legal frameworks of different untries to deal with these cybercrimes.

3: Explain the importance of jurisdictional boundaries and identify the measures to overme cross jurisdictional cybercrimes.

4: Illustrate the importance of ethics in legal profession and determine the appropriate ethical and legal behavior acrding to legal frameworks.

5: Identify intellectual property right issues in the cyberspace and design strategies to protect intellectual property.

6: Assess legal issues with online trading, and analyze applicable e- ntracting and taxation regulations.

Data Mining - Course Code: IT605-T 1:

To understand basic terminology.

2: To display a mprehensive understanding of different data mining tasksand the algorithms for addressing them.

3: To evaluate models/algorithms with respect to their accuracy.

4: To demonstrate capacity to perform a self-directed piece of practical workthat requires application of data mining techniques.

5: To critique the results of a data mining exercise.

6: To develop hypotheses based on the analysis of the results obtained andevaluate its validity.

C++ Programming - Course Code: IT607-T

A student will be able to …..

1: Understand the structure and model of programming language C++.

2: Use the programming language C#.

3: Evaluate user requirements for software functionality required to decidewhether the programming language C++ can meet user requirements.

4: Propose the use of certain technologies by implementing them in the C++ programming language to solve a given problem.

5: Choose an engineering approach to solve problems.

Pr. Based on PHP & C++ (LAB) - Course Code: IT609P

1: To identify and handle errors that can occur while programming withPHP.

2: To introduce learner with object oriented programming in PHP

3: To use an object-oriented API to access SQL to SELECT, INSERT,UPDATE and DELETE data from tables.

4: To using the phpMyAdmin utility to administer the MySQL database.

5: To use OOP in PHP to define and use classes.

6: To choose an engineering approach to solve problems, starting from the acquired knowledge of programming and knowledge of operatingsystems.

7: To understand nversion functions used in C++.

Major Project: Course Code: IT610P

A learner will be able to….

1: Formulate a real world problem and develop its requirements.

2: Develop design solutions for a set of requirements.

3: Test and validate the nformance of the developed prototype against theoriginal requirements of the problem.

4: Work as a responsible member and possibly a leader of a team indeveloping software solutions.

5: Express technical and behavioral ideas and thoughts in oral settings.

6: Participate in and possibly moderate, discussions that lead to making decisions.

7: Express technical ideas, strategies and methodologies.

8: Prepare and conduct oral presentations.

M. Sc. (I.T.) First Year (I semester)

Object Oriented Programming in C++: Course Code: **CSI401**

Students will be able to….

1: Acquire an understanding of all object oriented concepts and issues involved in effective class design.

2: Write C++ programs that use object oriented concepts such as information hiding, construstors, destructors, inheritance, file handling, exception handling, polymorphism and template etc.

3: Develop the programming skill in students.

4: Write C++ programs using the more esoteric language features.

5: Utilize object oriented techniques to design C++ programs.

6: Use the standard C++ library.

7: Exploit advanced C++ techniques.

Computer System Architecture Course Code: CSI402

1: To get familiar with concepts of architecture of computer and different electronics devices required to develop a computer.

2: To learn number systems and their representation, arithmatics of different number systems.

3: To understand basic logic gates, Boolean algebra and K-maps.

4: To study arithmetic circuits, mbinational circuits and sequential circuits, flip flops and registers.

Operating System: Course Code: CSI403

Students will be able to….

1: Master functions, structures and history of operating systems.

2: Master understanding of design issues associated with operating systems.

3: Understand the process management concepts including scheduling, synchronization, and deadlocks.

4: Familiar with multithreading.

5: Master concepts of memory management including virtual memory.

6: Master system resources sharing among the users.

7: Master issues related to file system interface and implementation and disk management.

8: Familiar with protection and security mechanisms.

9: Familiar with various types of operating systems including UNIX.

10: To understand operating system and their components.

Relational Database Management System: Course Code: CSI404

1: To know about database system basic concepts, architecture, features, purpose and advantage of DBMS.

2: To learn components of a DBMS: Users, facilities & structures.

3: To learn data modeling & design.

4: To learn entity-relationship data model.

5: To understand about basics of relational model, normalization, relationalalgebra.

6: To provide students with an understanding of relational model, relationaldatabase design, and SQL.

M.Sc.(I.T.) First Year (II semester)

Programming in re Java: Course Code: CSI405

1: To acquire knowledge and skills needed to develop applications in Javafor Microsoft and sun platform.

2: To focus on fundamental concepts, designing user interfaces, program structure, language syntax, and implementation details.

3: To implement object oriented programming concepts.

4: To use and create packages and interfaces in a Java program

5: To use graphical user interface in Java programs.

6: To create applets.

7: To implement exception handling in Java.

8: To implement multithreading.

9: To use input/output streams.

10: To handle security implementations in Java.

Software Engineering and CASE Tools Course Code: CSI406

1: To provide theoretical and practical foundations in software engineering.

2: To understand the principles and methods of software engineering, including current and emerging software engineering practices and support tools.

3: To familiarize with the development of software products from an industry perspective, including generation of appropriate documents, under tight schedules and limited resources.

4: To broaden knowledge of Software Process Models.

5: To be aware of software products

6: To increase proficiency in software project management.

7: To gain proficiency in engineering.

8: To gain practical experience in UML tools.

9: To acquire the background of software architecture.

10: To understand and be able to explain software metrics and software.

Data Structure and Algorithms: Course Code: CSI407

1: To understand the principles of data structure, algorithms and issues related to allocation of memory, optimization of algorithms, time and space mplexity associated with algorithms, sorting, searching algorithms applied on data structures.

2: To understand the fundamental data structures, including lists, stacks, queues, trees, and graphs, and it examines classic algorithms that use

these structures for tasks such as sorting, searching, pattern matching, and data mpression.

3: To apply analyzing techniques to improve efficiency of algorithms.

4: To apply the key notions of object-oriented programming, including encapsulation and abstract data types.

Computer Network: Course Code: CSI408

1: To study various structure and topologies of mmunication media.

2: To understand the basic concepts and terminology in computer networks.

3: To know the physical layer issues in computer networks, types of network topologies and protols.

4: To understand the error rrection, detection and MAC protols.

5: To learn the concepts associated with submitting and routingmechanisms.

6: To understand issues associated with transport layer protols.

Programming in Advance Java (CSI501)

1: To understand and apply the graphics and animation on the web pages, using Java Applets.

2: To understand and design a full set of event driven UI widgets and other cocomponents, including windows, menus, buttons, checkboxes, text fields, scrollbars and scrolling lists, using Abstract Windowing Toolkit (AWT) & Swings.

3: To understand Java data base nnectivity to retrieve and manipulatethe information on rational database through Java programs.

4: To understand server side programming using Servlets and JSP.

5: To understand Java bean to use the reusable software components.

6: To understand the invocation of the remote methods in an applicationusing RMI.

7: To learn the development of enterprise based applications, using EJB.

8: To familiarize   students   with   struts   frameworks   which   provides opportunity to reuse the des for quick development.

Decision Support System and Intelligent system (CSI502):

1: To provide logic based frameworks for design and implementation ofdecision support system and intelligent system.

2: To apply logic to take correct decisions.

3: To understand the c o ncept of decision support system methodologiesand technologies.

4: To understand the different types of modeling and analysis.

5: To apply data warehouse ncept with proper working of ETL system.

6: To understand visualization of data.

Network Security (CSI503)

After completing the urse, students will be able to understand…..

1: Basic security services.

2: Basic concepts of risk, threats, vulnerabilities and attack.

3: Important ethical and legal issues in computer security.

4: Goals of end-to-end data security.

5: Role of random numbers and prime numbers in security.

6: Standard symmetric encryption algorithms.

7: Architecture for public and private key cryptography.

8: Methods of digital signature and encryption.

9: Key management and exchange of protol work.

ASP.NET (CSI504)

1: To understand the design and development of web application.

2: To apply ASP. NET for building good web application using databases, security and web services.

3: To build dynamic web application.

4: To undertake mmercial web development projects.

5: To expose technology of Microsoft ASP.NET adopted by the industry.

Programming VB. NET (CSI505)

1: To acquire knowledge and skills needed to develop applications inMicrosoft Visual Basic.NET for the Microsoft.NET platform.

2: To focus on user interfaces, program structure, language syntax, and implementation details.

3: To understand the visual basic.NET.

4: To create a simple visual basic NET–based application using Windows application template.

5: To use forms and controls to create a user interface.

6: To create and use variables and arrays.

7: To create and use sub and function procedures, including predefinedfunctions.

8: To implement decision structures and loops by using nditional expressions.

9: To validate user input for fields, ntrols, and forms.

10: To apply object-oriented programming techniques.

Open Source Web Programming using PHP (CSI506)

1: To acquire genuine domain knowledge using application development,and object oriented PHP as the programming environment.

2: To understand working of server-side programming on the web.

3: To understand the PHP Basic syntax for variable types and calculations.

4: To create nditional structures.

5: To store data in arrays.

6: To use PHP built-in functions and creating custom functions.

7: To develop web application of open source platform and aware ofnfiguration of tools required to development of web application.

Major Project (CSI557)

1: To formulate a real world problem and develop its requirements.

2: To develop a design solution for a set of requirements.

3: To test and validate the c o nformance of developed prototype against the original requirements of problem.

4: To work as a responsible member and possibly a leader of a team in developing software solutions.

5: To express technical, behavioral ideas and thought in oral settings.

6: To participate in discussions that lead to making decisions.

7: To express technical ideas, strategies and methodologies in written form.

8: To prepare and coconduct oral presentations.

9: To understand new tools, algorithms, and/or techniques that ntributesto the software solution of projects.

10: To generate alternative solutions, c o compare them and select the optimum one.

Seminar (CSI558)

1: To acquire new technologies while searching the topic.

3: To enhance presentation skills of the learner.

Course Outcome
BCA

Accountancy I

1: To understand double entry acunting system and application of itsrules.

2: To understand business transactions in preparing 'financial statements'of sole traders and partnership firms.

3: To know the mechanism of maintaining 'Single and Double lumn CashBook'.

4: To find early step employability in MSMEs in acunts.

5: To develop confidence for the preparation of professional urses like CA,CMA and CS.

Industrial Enomics

1: To understand the importance of micro and macro economics

2: To analyze the impact of e-mmerce on business models and strategy.

3: To describe the major types of enomics.

4: To understand the obstacles in the development of an under developedenomy.

5: To identify the factors of production and its rewards

6: To understand the indifference curve analysis.

Business Statistics

1: To produce appropriate graphical and numerical descriptive statistics for different types of data.

2: To apply probability rules and coconcepts related with discrete and continuous random variables to answer questions within a business context.

Operating System I

Learners will be able to understand....

1: Fundamental coconcepts of operating system

2: Types and functions of operating systems

3: DOS structure and mmands

4: Applications of batch file programming

5: To create and execute basic batch file scripts

6: to understand differences between Windows and DOS

Communication Skills

1: To understand and apply knowledge of human mmunication andlanguage processes.

2: To understand and acquire communication skills.

Basics of Web Technology I

1: To understand the basics of web technology.

2: To make aware the learners about coding in editors.

3: To understand web designing

4: To understand the basics of web designing.

5: To create and execute web pages.

6: To understand Html tags, CSS and JSS.

Semester II Financial   Acuntancy II

1: To describe, explain, and integrate fundamental coconcepts underlyingacunting, finance, management, marketing, and enomics.

2: To apply information to support business processes, practices, such asproblem analysis and decision making.

Operating System II

1: To understand fundamental operating system abstractions.

2: To understand processes, threads, files, semaphores, IPC abstractions,shared memory regions etc.

Business Mathematics

1: To demonstrate basic marketing mathematics.

2: To apply logic to solve problems including trade disunts, cash discounting, and markup and markdown calculations.

Programming in C

1: To understand the fundamental c o concepts of programming

2: To beme aware of steps of problem solving, designing an algorithm andflowchart

3: To understand the structure of procedure oriented programming

4: To acquire ability to convert problems into programs

Principles of management

1: To understand the primary functions of management and the roles of managers.

2. To aware students about the major contributions done in the field ofmanagement.

Basics of Web Technology II

1: To analyze a web page and identify its elements and attributes.

2: To create web pages using XHTML and Cascading Style Sheets.

3: To build dynamic web pages using JavaScript.

4: To create XML documents.

Principles of management

: To gain knowledge about all management process and create understanding in detail about the application of management in various specialized activities such as finance management, material management,HRM, etc.

Semester III

OOPs using

CPP

1: To describe the object-oriented programming approach in nnectionwith C++

2: To apply the co concepts of object-oriented programming.

Business law I

1: To understand the changing time business needs.

2: To create awareness about rights and the safety.

3: To understand amendments in business.

4: To understand threats and legal nsequences.

4: To acquire skills to survive in business world.

5: To study rights of nsumers and help students to develop their overallskills.

DBMS

1: To understand the basics of DBMS.

2: To make the learners about DBMS and relational database.

3: To understand relation between database systems.

4: To understand the techniques of concurrency.

5: To understand normalization and its rule.

6: To learn how to fetch fire the query in DBMS

E- Business Essential

1: To understand the coconcepts and nature of e- business.

2: To make aware of ethics of e-business.

3: To understand the relation between e-business and ICTs.

4: To understand e-business model and supply chain management.

5: To gain knowledge of internet banking.

Semester IV

Data Structure & algorithm

1: To understand the fundamental concepts of Data Structure.

2: To make learners aware of sorting techniques.

3: To understand algorithms and their development.

4: To applying the understanding in solving basic programming problems.

5: To create and execute ideas using problem solving approach.

Cost Acuntancy

1: To enable learners to acquire management skills.

2: To account for sts by factoring in both variable and fixed sts.

Java Programming

1: To understand the differences between Java and CPP.

2: To differentiate between structured and object-oriented programming approaches.

3: To understand the significance of Java and jdk environment

4: To become aware of code in java and develop applications

5: To understand debug and remove errors.

6: To create Applets in Java

MIS & DSS

1: To analyze the impact of MIS on the working of an organization.

2: To describe the major types decisions.

3: To explain the process of Supply Chain Management.

4: To identify the Limitations of Information Technology.

Business law – II

1: To understand   basic   and   broad   knowledge   in   business   laws   in management.

2: To learn the concepts, principles and theories.

3: To understand simple business laws.

4: To create awareness of the different business laws.

Entrepreneurship development

1: To understand the nature of entrepreneurship.

2: To understand the function of the entrepreneur in the successful,commercial application of innovations.

3: To confirm an entrepreneurial business idea.

Advance Networking

1: To plan the interworking of distributed application basing on SemanticWeb technology.

2: To develop and evaluate distributed application architectures accordingto functional requirements.

Semester V : Management Accounting

1: To explain the relationship between st acunting-financial accountingand managerial accounting.

2: To explain the ncept of management accounting

3: To explain the importance of management acunting for businesses

SQL 2017

1: To build and maintain database using SQL commands.

2: To use DML statements like insert, update and delete.

3: To write and call stored procedures in database.

4: To use functions stored in database.

VB:

1: To understand the visual programming concepts.

2: To explain basic concepts and definitions.

3: To express nstants and arithmetic operations.

4: To distinguish between variable and data types

Organizational Behavior

1: To demonstrate the applicability of the ncept of organizational behavior.

2: To demonstrate the applicability of analyzing the mplexities associatedwith management of individual behavior in the organization.

3: To analyze the mplexities associated with management of the groupbehavior in the organization.

Software engineering

1: To understand the SDLC and various software development models

2: To become aware of the needs and requirements of software development

3: To understand the development of applications.

Banking & Insurance

1: To introduce the banking system in India.

2: To explain the various functions of Reserve Bank of India.

3: To enhance the understanding of factors of Electronic Banking educateabout the forecasting and decision making procedure in management.

4: To know the meaning of Insurance and study Insurance mpanies withits role and functions

Semester VI

Elements of mmercial Portal (HTML 5)

1: To acquire the skills for website development skills.

2: To become aware of current trends and technologies

3: To understand the mobile OS development and get industry mpetentskills.

Business Law III

1: To explain the concepts in business laws with respect to foreign trade.

2: To apply the global business laws to current business environment.

3: To analyze the principle of international business and strategies adoptedby firms to expand globally.

Software testing

1: To understand different software testing techniques and strategies andbe able to apply specific (automated) unit testing method to the projects.

2: To distinguish characteristics of structural testing methods.

3: to discuss the relevance of the services

Course Outcomes
M.Sc.(Computer Science)

1) **Course Code CSC-401 (Constitution Of India)**

   1. Student will be able to understand the constitution of India.

   2. Student will be able to know fundamental rights.

   3. To learn constitution History & Drafting.

2) **Course Code CSC-402 (Research Methodology.)**

   1. To learn Foundations and principles of research methodology.

   2. To understand various methods/Mechanism involved solving, reviewing & Testing.

   3. To understand choose appropriate quantitative or qualitative methods to collect data.

3) **Course Code CSC-403 (Programming-1)**

   1. To learn basic skill required in writing programs.

   2. To Understand develop the foundation for programming-2 and programming-3.

   3. To familiar with different programming.

4) **Course Code CSC-404 (Introduction to Algorithms)**

   1. To learn conventions and significance of writing algorithm.

   2. To study estimate the performance of algorithms.

   3. Study and implement simpler as well as complex data representation system.

5) **Course Code CSC-405 (Relational Database Management System)**

   1. To understand the basic difference between database and relational database.

   2. To learn provided mechanism for representation of database in to XML.

   3. To understand SQL queries for retrieving information from databases.

6) **Course Code CSC-406 (Mathematical foundation and statistical method)**

   1. Students are able to perform mathematical operations based on sets theory.

   2. To understand a solid foundation for employment.

   3. To learn statistical analysis.

7) **Course Code CSC-407 (Modern Operating System)**

   1. To understand knowledge of memory management and deadlock algorithms.

   2. Study of Linux operating system design.

8) **Course Code CSC-408 (Techinical Report Writing)**

   1. To learn a comprehensive research methodology.

2. To understand critically analyze research methodologies.

3. To learn propose and distinguish appropriate research design.

9) Course Code CSC-409 (Programming-2)

1. To familiar with different programming .

2. To learn basic skill required writing programs.

3. To understand develop the foundation for programming 2 & 3.

10) Course Code CSC-410 (Data Communication)

1. To learn data communication and networking protocols.

2. To understand exchange of data between directly connected devices, aspects of transmission.

3. To study principles and mechanism required for exchange of data among computers.

11) Course Code CSC-411 (Software Engineering

1. To understand analyze processing interactions and optimization processes.

2. To learn process models proper software Testing versions of Software.

3. To understand the st of designed software products.

12) Course Code CSC-424 (Foundation of Electronics)

1. To understand basic electronics in detail.

2. To learn digital basic electronics.

3. To understand electronic Instruments and communication basic.

13) Course Code CSC-440 (Digital Signal Processing)

1. To understand different signals.

2. To learn transform basic Fourier transform.

3. To understand filters and discrete Fourier transform.

14) Course Code CSC-414 (Compiler Design)

1. To understand the concepts and principles of compiler design.

2. To learn grammars and language definition.

3. To Understand various phases of designing a compiler.

15) Course Code CSC-414 (Computer Graphics)

1. To understand basics of lighting and shading, Texture mapping.

2. To learn fundamental of 3D Graphics pipeline.

3. TO understand fundamental of modeling & animation.

16) Course code CSC – 444 (Microcontroller programming)

1. To learn design with PIC microcontroller.

2 To understand 8051 microcontrollers.

3. To learn embedded coding with 8051 microcontroller.

17) Course code CSC – 454 (Internet of things).

1. To understand design some of the IOT applications.

2. To learn internet of things.

3. To learn controlling home appliances.

18) Course Code CSC– 416 (Dissertation)

1. To learn ability to communicate efficiently.

2. To understand ability to identify formulate & model problems

3. To design ability to acquire & apply fundamental principles of computer science.

19) Course code CSC - 420 (Seminar)

1. Ability to deliver & make use of visual audio & audio visual material.

2. Ability to speak cogently with or without notes & present & discuss either works as an individual.

3. Ability to evaluate information & use & apply relevant theories.