

DEPARTMENT OF B.COM (COMPUTER APPLICATION)

ABOUT THE DEPARTMENT:

- B.Com (Computer Application) department is established in the year 2003-2004. Intake of department is 120 Students.
- The department is conducting the COC (Career Oriented Course) for B.Com from 2013 onwards.

SPECIALITY:

Department is very old with well experienced, dedicated and well Qualified Faculties:

The department has well qualified, experienced and long-standing faculty members. Many of them are pursuing research in thrust areas of IT sector. The faculty members regularly interact with the students to motivate them towards self-learning, peer learning and collaborative learning that brings out the best in students and make their experience in the department memorable.

Classrooms with ICT facilities:

The Department has a hi-tech learning environment with adequate number of well-furnished and well-equipped laboratories for C/ C++ Programming, Java Programming, Python programming, Web application development, Database Management Systems, Object Oriented Programming, .NET Programming, and many more.

These laboratories are facilitated with upgraded hardware, licensed software, hi-speed Internet connection (wired & wireless) and a pleasant working environment to meet the requirements of students and faculties.

Curriculum in accordance with Industry:

The curriculum of B. Com Computer Application is a proper blend of IT industry-relevant subjects taught through collaborative learning. It bridges the gap between Industry and academics. The Department is working hard in thrust areas of IT sector. In addition to the final Major project, seminars and mini projects are included to facilitate the students a platform to practically implement their learning to solve real-world problems.

Wi-Fi / Broadband Internet Connection:

Campus is WIFI. Internet facility is available for staff and students.

Seminar Hall with projector:

Seminars, technical talks are regularly being conducted by the department to make the students understand industry needs and cutting edge technologies.

Industry experts, academicians and successful alumni are invited regularly to the department to share their experiences through interaction with the students that boost the confidence among the students during placement drives.

100%placement Assistance:

The Institute has signed Memoranda of Understanding (MoUs) with different industries, companies and training organizations to train, asses and provide placement & internship opportunities to the students. The department has experienced excellent academic results in last 5 years. Besides regular classes, tutorial classes, bridge courses, remedial classes are conducted to deal with slow learners of the department

Educational Tours:

Industrial visits to various renowned software and core companies are regularly arranged to pave way for the students to get exposed to working atmosphere of reputed companies. All the students are taken to these industry visits every year under the supervision of faculty members of the department.

All round development of students:

The department conducted various competitions like to support co-curricular and extra-curricular interests of the students. These competitions comprise of student members and faculty members to carry out different activities round the year. The winners are encouraged with awards and rewards whereas the participants are encouraged with certificates which stimulate them for further participations. Our students are always motivated to participate in various competitions, workshops and technical activities conducted by colleges and Universities throughout the nation.

Best reference books and well stocked library:

Large numbers of text books, reference books are available in college library for students. A variety of Magazines', books, competitive exam books are also available in library.

A pleasant, motivating and friendly environment for study is available which inspires students to excel.

Certificate and value added Courses:

Department offers Certificate course in E-Commerce and Web Designing for B.Com Students and Value added course for final year students.

The Department of B. Com. Computer Application caters to the needs of global challenges. Department possesses adequate infrastructure, well equipped laboratories with 30 computers and 04 teachers to meet the curriculum requirements. In a very short span of its existence, department has earned the reputation as one of the best learning centers in Nagpur in the field of information Technology. The department has produced a good number of Entrepreneurs, Teachers and IT professionals till today. Alumni of this department find their existence and created landmarks in various organizations.

“Imparting Computer literacy is our supreme goal” for completing curricular activities.

In the department, along with coordinator Mrs. Mona Chandak , and other faculty members Mrs. Rita Bhaisare, Ms. Pooja Jaiswal Ms. Punam Bangde, strive to upgrade their expertise in the disciplines and impart through knowledge with practical knowledge on the subjects. Expert talks, Seminars are a continuing routine to enhance the skills of the students. Also the faculties are acutely active in co-curricular, extra-curricular and extension activities in shaping the students so that they can be selected in Technical Industry.

PROGRAMME OUTCOMES:

Students of all undergraduate general degree Programmes at the time of graduation will be able to.....

PO1. Critical Thinking: Take informed actions after identifying the assumptions that frame our thinking and actions, checking out the degree to which these assumptions are accurate and valid, and looking at our ideas and decisions (intellectual, organizational, and personal) from different perspectives.

PO2. Effective Communication: Speak, read, write and listen clearly in person and through electronic media in English and in one Indian language, and make meaning of the world by connecting people, ideas, books, media and technology.

PO3. Social Interaction: Elicit views of others, mediate disagreements and help reach conclusions in group settings.

PO4. Effective Citizenship: Demonstrate empathetic social concern and equity centred national development, and the ability to act with an informed awareness of issues and participate in civic life through volunteering.

PO5. Ethics: Recognize different value systems including your own, understand the moral dimensions of your decisions, and accept responsibility for them.

PO6. Environment and Sustainability: Understand the issues of environmental contexts and sustainable development.

PO7. Self-directed and Life-long Learning: Acquire the ability to engage in independent and life-long learning in the broadest context socio-technological changes.

COURSE OUTCOMES WITH SYLLABUS:

Semester – I

Paper – I

Course name - English and Business Communication – I

Course code - 1T1

COURSE OUTCOMES

CO1: The students will be able to **develop** their business communication skills and writing skills

CO2: The students will be able to **create** different types of letters which are very important during job opportunities

CO3: The students will be able to **evaluate** social values through short stories.

CO4: The students will be able to **interpret** different words like synonyms, antonyms, single word for a group of words, change words from adjective to noun & noun to adjective.

CO5: The students will be able to **understand** the working of the digital world.

UNIT I

A. Comprehension of an Unseen Passage

B. Enriching Vocabulary: Synonyms and Antonyms, Single Word for a Group of Words, Change of Word from Noun to Adjective & vice-versa.

UNIT II

Business Correspondence: Application for Employment, Job Offer Letters, Sales letters, Claim and Adjustment Letters

UNIT III

Communication Process: Sender, Channel, Message, Receiver and Response

Types of Communication:

- a. According to mode: a. Oral b. Written
- b. According to Medium: a. Electronic b. Print
- c. According to number of participants: a. Dyadic b. Group
- d. According to Direction: a. One-way b. Two-way
- e. According to Purpose: a. General b. Business(Specific)

UNIT IV

Textbook entitled ‘Prism: Spoken and Written Communication, Prose & Poetry’ published by Orient Black Swan

Prose

- i) With the Photographer – Stephen Leacock
- ii) Socrates and the Schoolmaster – F. L. Brayne
- iii) Speech on Indian Independence – Jawaharlal Nehru

Poetry

- i) On Television - Roald Dahl
- ii) The Felling of the Banayan Tree – Dilip Chitre
- iii) Stay Calm - Grenville Kleiser

Paper - II

Course Name - Financial Accounting

Course code -1T2

COURSE OUTCOMES

CO1: The students will be able to **describe** accounting concepts and conventions.

CO2: The students will be able to **understand** the classification of accounts, double entry system and accounting cycle

CO3: The students will be able to **build** the trading, profit & loss account and balance sheet (final statement)

CO4: The students will be able to **explain** the difference between consignment and sale

CO5: The students will be able to **analyze** valuation of goodwill of the company

UNIT – I

Accounting Concepts:- Introduction, Accounting Concepts and Conventions, Generally Accepted Accounting Principles(GAAP), Conceptual Basis of a Balance Sheet, Capital and Revenue Income and Expenditure, Indian Accounting Standards AS 1 to AS 10.

Mechanics of Accounting:- Introduction, Classification of Accounts, Double Entry System, Overview of Accounting cycle, Preparing journals, Subsidiary Books, Ledger, Preparation of Trial Balance (Theory & Numerical)

UNIT – II

Preparation of final Accounts of Sole Traders :- Introduction, Describe format of P & L Account, Format of Balance Sheet, Treatment of Adjustments, The components of a set of final accounts for a sole trader. Prepare Trading Account, Profit & Loss Account and Balance Sheet (Theory & Numerical)

UNIT – III

Valuation of Goodwill – Meaning and need for valuation of goodwill, Feature of goodwill, Factors influencing valuation for goodwill, Average profit method (Future maintainable profit method), weighted average profit method, Super profit method, Capitalization method, Annuity Method. (Theory & Numerical)

UNIT – IV

Consignment Accounts: - Meaning, Needs, Advantages and formalities in consignment, difference between a consignment and a sale, Performa invoice, Account sales, Accounting procedure of consignment, valuation of consignment stock (Theory & Numerical)

Paper - III

Course Name – Fundamentals of Computer

Course code -1T3

COURSE OUTCOMES

CO1: The students will be able to **describe** memory organization and working of computer system.

CO2: The students will be able to **convert** numbers in different number systems.

CO3: The students will be able to **explain** various functions of operating system.

CO4: The students will be able to **use** ms-office package.

CO5: The students will be able to **develop** the fundamental concepts of computer with their present level of knowledge.

SYLLABUS:

UNIT – I:-Understanding the Computer:- Introduction, Evolution, Generation, Classification and Application of computers. **Memory and Storage Systems:** Introduction, Memory representation, Random Access Memory, Read Only Memory, Storage systems, Magnetic storage systems, Optical storage systems, Magneto optical system, Solid-state storage devices.

UNIT – II :-Input Devices: Introduction, Keyboard, Pointing devices, Scanning devices, Optical recognition devices, Digital camera, Voice recognition system, Data acquisition sensors, Media input devices. **Output Devices:** Introduction, Display monitors, Printers, Impact printers, Non-impact printers, Plotters, Voice output systems, Projectors, Terminals. **Computer Codes:** Introduction, Decimal system

UNIT – III:-Computer Software: Introduction, Types of computer software, System management programs, System development programs, standard application programs.

Programming Languages: Introduction, History of programming languages, Generations of

programming languages, Characteristics of good programming languages, Developing a program, Running a program.

Data Communication and Networks: Introduction, Data communication using modem, Computer network, Network topologies, Network protocol and software, Application of network.

UNIT – IV:-Operating Systems: Introduction, History of operating systems, Functions of operating systems, Process management, Memory management, File management, Device management, Security management, Types of operating systems, Providing user interface, Popular operating systems. **Microsoft Software:** Introduction, MS-DOS, MS Word systems, MS Excel systems, MS PowerPoint systems, MS Access systems,

Paper - IV

Course Name – Programming in C

Course code -1T4

COURSE OUTCOMES

CO1: Students will be able to **define** the characteristics of Procedure Oriented Programming Languages.

CO2: Students will be able to **demonstrate** an understanding of basic elements like control statements, Arrays and Strings.

CO3: Students will be able to **develop** programs using the concepts of pointers, functions.

CO4: Students will be able to **analyze** the problem for its decomposition into functions.

CO5: Students will be able to **choose** the right data representation formats based on the requirements.

SYLLABUS:

UNIT – I:-Data Types, Operators and some statements: Identifiers and keywords, Constants, C Operators, Type Conversion. **Writing a Program in C:** Variable declaration, Statements, Simple C Programs, Simple Input Statements, and Simple Output Statements. **Control Statements:** Conditional Expressions, Loop Statements, Breaking control statements.

UNIT – II :-Functions and Program Structures: Introduction, Defining a Function, Types of User Defined Functions, Return Statement, Actual & Formal Arguments, Local & Global Variables, Scope of Variables, Recursive Functions. **Arrays:** One dimensional array, Array

Declaration, Array Initialization, Two dimensional array, Declaration and initialization of two dimensional array, multidimensional array, Character array and Strings functions.

UNIT – III:-Pointers: Pointer Declaration, Pointer Arithmetic, Pointers and Functions, Pointers and Arrays, Pointer and Strings, Array of Pointers, Pointers to Pointers. **More on Functions:** Pre-processors, Macros, Header Files, standard Functions.

UNIT-IV:-Structures, unions and File handling: Declaration of Structure, Initializing a Structure, Array of Structure, and Arrays within Structure, Pointer and Structure, Union. **Data File Operations:** Review of input/output Functions, Opening and Closing of files, Simple File Operation, Structures and File Operation, Block Read/Write, More on File operations, Random Access File processing.

Practical-I

Course Code-1P1

COURSE OUTCOMES

CO1: Students will be able to **illustrate** office automation tools.

CO2: Students will be able to **create** PowerPoint presentation.

CO3: Students will be able to **develop** programs using the concepts of pointers, functions.

CO4: Students will be able to **analyze** a problem and develop an algorithm to solve it.

CO5: Students will be able to **write** the c code for a given algorithm

Semester – II

Paper – I

Course Name - English and Business Communication – II

Course code - 2T1

COURSE OUTCOMES

CO1: Students will be able to **develop** human values like honesty, love, happiness, will power, true friendship through various short stories.

CO2: Students will be able to **explain** social views and opinions on current topics.

CO3: Students will be able to **speak** fluently by overcoming the barriers of communication.

CO4: Students will be able to **spot** the grammatical errors through punctuation and words often confused.

CO5: Students will be able to **create** different types of letters which are very important in the corporate world.

UNIT-I

- A. Comprehension of an Unseen Passage
- B. Punctuation, Words often confused

UNIT-II

Business Correspondence: Inviting Quotations, Placing Orders, Credit Letters - Granting/Refusing Credit, Letter to Bank for overdraft facility

UNIT-III

- Elements of communication
- Objectives of communication
- Essentials of effective communication
- Barriers to effective communication
- Suggestions to overcome the barriers

UNIT-IV

Textbook entitled ‘Prism: Spoken and Written Communication, Prose & Poetry’ published by Orient Black Swan

Prose

I. An Astrologer's Day – R. K. Narayan

II. The Gift of the Magi – O. Henry

III. The Bet – Anton Chekhov

Poetry

I. Say Not the Struggle Naught Availeth - Arthur Hugh Clough

II. No Men are Foreign- James Kirkup

III. Abou Ben Adhem - James Leigh Hunt

Paper – II

Course Name –Principles of Business Management

Course code - 2T2

COURSE OUTCOMES

CO1: The Students will be able to **define** the principle of management.

CO2: The students will be able to **compare** contribution of managerial scientist

CO3: The students will be able to **describe** the planning, co-ordination and decision process.

CO4: The students will be able to **summarize** functions of management.

CO5: The students will be able to **analysis** the process and technique of control, modern management technique.

SYLLABUS:

UNIT- I :-Nature And Functions Of Management – Importance Of Management, Definition Of Management, Management Function Or The Process Of Management, Levels Of Management, Organizational Or Business Functions, Role Of A Senior Management, Managerial Skills, Managerial Effectiveness, Management And Administration, Management- A Science Or An Art?, Management- A Profession?, Professional Management Vs Family Management, Management Of International Business.

Planning- Nature Of Planning, Importance Of Planning, Types Of Plans, Steps In Planning, Strategic Planning Process, Limitation Of Planning, Making Planning Effective, Planning Skills, Strategic Planning In The Indian Industry. **Decision Making-** Meaning Of Decision, Types Of

Decision, Steps In Relational Decision-Making, Rationality In Decision-Making, Environment Of Decision-Making, And Common Difficulties In Decision-Making.

UNIT- II :-Organization- What Is An Organization?, Process Of Organizing, Principles Of Organizing, Span Of Management, Departmentalization, Process Departmentalization, Purpose Departmentalization, Organization Structure, What Type Of Structure Is Best?, Emerging Organization Structures, Committees, Teams, International Organization Structures. **Coordination** – Distinction Between Coordination And Cooperation, Distinction Between Coordination And Control, Need For Coordination, Requisites For Excellent Coordination, Types Of Coordination, Techniques Of Coordination, Difficulties Of Coordination, **Staffing-** Importance And Need For Proper Staffing, Manpower Planning, Recruitment, Selection, Placement, Induction, Manpower Planning In India.

UNIT- III :-Training And Development- Difference Between Training, Education And Development, Advantages Of Training, Steps In Setting Up A Training And Development Programme, Design And Development Of The Training Programme, Evaluation Of Training And Development, Executive Training Practices In India, Mentoring, Learning Organization, Knowledge Management **Direction And Supervision-** Requirements Of Effective Direction, Giving Orders, Motivation, Job Satisfaction, Organizational Commitment, Morale, First-Level Or Front- Line Supervision.

UNIT- IV:-Communication- Importance Of Communication, Purpose Of Communication, Formal Communication, Forms Of Communication, Informal Communication, The Communication Process, Barriers To Communication, Principles Of Effective Communication. **Managerial Control-** Steps In A Control Process, Need For Control System, Benefits Of Control, Essentials Of Effective Control System, Problems Of The Control System, Control Techniques.

Paper – III

Course Name –Programming in C++

Course code - 2T3

COURSE OUTCOMES

CO1: Students will be able to **define** the characteristics of Procedure and object Oriented Programming Languages.

CO2: Students will be able to **demonstrate** an understanding of basic elements like control statements, Arrays.

CO3: Students will be able to **develop** programs using the concepts of classes and object.

CO4: Students will be able to **analyze** the problem for its decomposition into functions.

CO5: Students will be able to **choose** the right data representation formats based on the requirements of the problem.

SYLLABUS:

UNIT – I :-Introduction to Object Oriented Programming: Introduction, What is Object Oriented Programming(OOP)?, Structured Procedural programming(SPP), Object Oriented Programming OOP, Characteristics of OOPs, Advantages of OOPs, Disadvantages of OOPs, Comparison of SPP and OOP, Steps in Developing OOP Programs, Structure of Object Oriented Programs, Object Oriented Languages, Importance of C++. **Data Types, Operators and Expressions:** Identifiers & Keywords, Data Types, C++ Simple Data Types, Literals, Variables, the Const Data type, C++ Operators, Type Conversion. **Input and Output Streams:** Comments, Declaration of Variables, the Main () Function, Simple C++ Programs, Program Termination, Features of IOStream, Keyboard and Screen I/O, Manipulator Functions, Input and Output (I/O) Stream Flags. **Control Statements:** Conditional Expressions, Loop Statements, Nested Control Structures, Breaking Control Statements.

UNIT – II :-Function and Program Structures: Introduction, Defining a Function, Return Statement, Types of Functions, Actual & Formal Arguments, Local & Global Variables, Default Arguments, Structure of C++ Program, Order of the Function Declaration, Manually invoked Functions, Nested Functions, Scope Rules, Side Effects, Storage Class Specifiers, Recursive Function, Pre-processors, Header Files, Standard Functions. **Arrays:** Introduction, Array Notation, Array Declaration, Array Initialization, Processing with Arrays, Character Array. **Pointers and Strings:** Introduction, Pointer Arithmetic, Pointers and Functions, Pointers and Arrays, Pointer and Strings.

Structures and Unions:- Introduction, Declaration of Structure, Processing with Structures, Initialization of Structures, Functions and Structures, Array of Structure, Pointer and Structure, Unions.

UNIT – III:-Classes and Objects: Introduction, Structures and Classes, Declaration of Class, Member Functions, Defining the Object of a Class, Accessing a Member of Class, Array of Class Objects, Pointer and Classes. **Special Member Function:** Introduction, Constructors, Destructors, Inline Member Functions, Static Class Members, Friend Function, This Pointer. **Single and Multiple Inheritances:** Introduction, Single Inheritance, Types of Base Classes, and Type of Derivation, Multiple Inheritance, and Member Access Control.

UNIT-IV:-Overloading Functions and Operators: Function Overloading, Operator Overloading, Overloading of Binary Operators, Overloading of Unary Operators. **Polymorphism and Virtual Functions:** Polymorphism, Virtual Functions, Pure Virtual Functions, Abstract Base Classes, Virtual Base Classes. **Data File Operations:** Opening and Closing of Files, Reading/Writing a Character from a File, Binary File Operations.

Paper – IIV

Course Name –E-Commerce & Web Designing

Course code - 2T4

COURSE OUTCOMES

CO1: The students will be able to **describe** the basic concepts and technology used in the field of e-Commerce

CO2: The students will be able to **summarize** Electronic Markets.

CO3: The students will be able to **use** HTML programming Language.

CO4: The students will be able to **create** structure of a Web Site.

CO5: The students will be able to **create** a static site.

SYLLABUS:

UNIT – I:-Introduction to Electronic Commerce- Electronic Commerce : The Scope of Electronic Commerce, Definition of Electronic Commerce, Electronic Commerce and the Trade Cycle, Electronic Markets, Electronic Data Interchange, Internet Commerce, e-Commerce in Perspective. **Business Strategy in an Electronic Age: The Value Chain, Supply Chains, Porter’s Value Chain Model, Inter Organizational Value Chains. Competitive Advantage:**

Competitive Strategy, Porter's Model, First Mover Advantage, Sustainable Competitive Advantage, Competitive advantage using e-Commerce.

UNIT – II:-Business to Business Electronic Commerce - Inter Organizational Transactions:

Inter Organizational Transactions, the Credit Transaction Trade Cycle, A Variety of Transaction, Pens and Things. **Electronic Markets: Markets**, Electronic Markets, Usage of Electronic Markets, Advantages and Disadvantages of Electronic Markets, Future of Electronic Markets. **Electronic Data Interchange (EDI):** Introduction to EDI, EDI definition, The Benefits of EDI, EDI Example. **Inter Organizational e-Commerce: Inter Organizational Transaction**, Purchasing Online, After Sales Online, e-Commerce in Desk top Facilities Management, Pens and Things and the Web.

UNIT – III :-Business to Consumer Electronic Commerce - Internet Shopping and the Trade

Cycle, Other e-Commerce Technologies, Advantages and Disadvantages of Consumer e-Commerce, Consumer e-Commerce at Pens and Things. **The Elements of e-Commerce :** Elements, e-Visibility, The e-Shop, Online Payments, Delivering the Goods, After Sales Service, Internet e-Commerce Security, A Web Site Evaluation Model. **Introduction to HTML:** Designing a Home Page, History of HTML, HTML Generations, HTML Documents, Anchor Tag, Hyper Links, Sample Html Documents. **Header and Body Sections: Header Section**, Title, Prologue, Links, Colorful Web Page, Comment Lines, Some Sample Html Documents. **Designing the body Section:** Heading Printing, Aligning the Headings, Horizontal Rule, Paragraph Tab Setting, Image and Pictures, Embedding PNG Format Images.

UNIT – IV:-Ordered and Unordered Lists:

Lists, Unordered Lists, Headings in a List, Ordered Lists, Nested List. **Table Handling: Table**, Table Creation in HTML, Width of the Table and Cells, Cells Spanning Multiple Rows/Columns, Coloring Cells, Columns Specification, Some Sample Tables. **Dhtml and Style Sheets:** Defining Styles, Elements of Styles, Linking a Styles Sheet to an HTML Document, In-Line Styles, External Styles Sheets, Multiple Styles. **Frames:** Frameset Definition, Frame Definition, Nested Framesets. **A web Page Design Project:** Frameset Definition, Animals, Birds, Fish. **Forms: Action** Attribute, Method Attribute, Input type Attribute, Drop down List, Sample Forms

Practical-I
Course Code-2P1

COURSE OUTCOMES

CO1: Students will be able to **create** a prototype web site

CO2: Students will be able to **write** a valid and concise code for static site.

CO3: Students will be able to **develop** programs using the concepts of class, objects, polymorphism and inheritance.

CO4: Students will be able to **analyze** a problem and develop an algorithm to solve it

CO5: Students will be able to **write** the c++ code for a given algorithm.

BCCA – Part – II

Semester – III

Paper - I

Course Name – Environmental Studies

Course Code – 3T1

COURSE OUTCOMES

CO1: The students will be able to **demonstrate** an integrative approach to environmental issues with a focus on sustainability.

CO2: The students will be able to **communicate** complex environmental information to both technical and non-technical audiences.

CO3: The students will be able to **demonstrate** an integrative approach to environmental issues with a focus on sustainability.

CO4: The students will be able to **understand** the global scale of environmental problems.

CO5: The students will be able to **evaluate** the global scale of environmental problems.

SYLLABUS:

UNIT – I:-Environment, Environment Studies, Need for public Awareness, Environmental Degradation, Shelter Security, Economic Security, Social Security, Effects of Housing on Environment , Effects of Industry on Environment. **Natural Resources-** Introduction, Types of Natural Resource, Forest Resources, Water Resources, mineral Resources, Energy resources,

Land Resources, Conservation of Natural Resources, Sustainable Lifestyles, Biogeochemical Cycle.

UNIT – II:-Ecosystem- Introduction to Ecology and Ecological Succession, Ecosystem, FoodChain, Ecological Pyramids, Types of Ecosystems, Forest Ecosystems, Aquatic Ecosystems, Grassland Ecosystem, and Desert Ecosystem. 48

Biodiversity and its Conservation- Biodiversity, Values or Benefits of Biodiversity, Biogeography Zones of India. Threats to Biodiversity, Human –Wildlife Conflicts, Conservation of Biodiversity.

UNIT – III :-Environmental Pollution ,Introduction, Public Health Aspects, Air Pollution, Land Pollution, Soil Pollution, Marine Pollution, Water Pollution, Noise Pollution, Thermal Pollution, Solid Waste Management, Role of Individuals in Pollution Prevention, Disaster Management.

UNIT – IV:-Social Issues and the Environment- Introduction, Sustainable Development, Urbanization, Water Conservation, Resettlement and Rehabilitation of People ; Its Problems and Concerns, ACTs for Environmental Protection, Carbon Credits, Initiatives and Roles of Nongovernmental Organization (NGOs) in Environmental Protection, Issues Involved in Enforcement of Environmental Legislation . Environment and Human Health, Environmental Education, Role of Information Technology in Environment and Human Health.

Paper - II

Course Name – Business Economics

Course Code – 3T2

COURSE OUTCOMES

CO1: The students will be able to **understand** the nature and scope of the business economics and their responsibilities.

CO2: The students will be able to **illustrate** the theory of production of cost.

CO3: The students will be able to **describe** the law of the demand and law of the supply.

CO4: The students will be able to **evaluate** the concept of production function and law of variable proportions.

CO5: The students will be able to **analysis** pricing decisions under different types of market.

SYLLABUS:

UNIT I:- Introduction: Economics and Business Economics– Meaning, Nature, concept & Scope of Business economics. **Basic problem of an Economy and Role of price Mechanism** – Basic problems of an economy, Classification of Economy, Its features, advantages and disadvantages. Free Enterprise Economy: Meaning & Features.

Theory of utility : Theory of Consumer Behavior – Nature of Human wants, Utility Analysis - Meaning and definition of utility, Concepts of Marginal Utility, Total Utility, Cardinal and ordinal approach of utility(Difference), Features of Utility, Law of diminishing Marginal utility.

UNIT II:-Theory of Demand and supply -Theory of Demand: Concept of Demand, Law of Demand-Meaning, Definition, and Assumptions & Exceptions. Elasticity of Demand - Meaning, Types and Factors affecting Elasticity of Demand. **Demand Forecasting** – Meaning, Definition, Importance and scope of Demand Forecasting, Methods of demand forecasting.

Supply Analysis – Supply: Meaning, Determinants and functions of Supply. Law of Supply, Elasticity of Supply: Meaning of Elasticity of Supply, Types of Elasticity of Supply

Unit – III:-Theory of Production and cost - Theory of Production: Meaning of Production, Factors of production, Concepts of Total Product, Average product and Marginal Product, Production Function, Short Run Production Function: Law of Variable Proportion, ISO Quant Curve, Long Run Production Function, Law of Returns to Scale.

Theory of Cost – Meaning of Cost, Cost Concepts, Cost Function, Concepts of total Cost ,Average Cost and Marginal Cost, Short Run Average Cost Curves, Long Run Cost Curve, Economies and Diseconomies of Scale

UNIT IV :-Market Structure And Pricing theory- Market Structure: - Meaning of market, Classification of Market, Concepts of Total revenue, Average revenue and Marginal revenue, Market Structure - Concept ,Features types. **50 Price** – Cost and Output Determination under Different types of markets- Perfect Competition, Monopoly, Monopolistic Competition, Equilibrium of firms under different market structures in short run and long run. Price Discrimination in monopoly and oligopoly. Kinked demand curve.

Paper - III

Course Name – Visual Basic Programming

Course Code – 3T3

COURSE OUTCOMES

CO1: The students will be able to **summarize** event driven programming model.

CO2: The students will be able to **develop** small applications in visual basic using control structures

CO3: The students will be able to **connect** visual basic application with the existing /new databases.

CO4: The students will be able to **identify** and remove bugs from an application.

CO5: The students will be able to **develop** a simple application in visual basic-6.0

SYALLABUS:

Unit – I:-Introduction to Visual Basic –Advantages of Visual Basic, Features of Visual Basic.
Visual Basic Window Components – Menu Bar, Standard Toolbar, Project Explorer Window, Form Layout Window, Properties Window, Toolbox, Code Editor Window, Object Browser,
Working With Forms – Extension & With Function of the File, Properties, Events and Method of the Form. **Using the Controls Of Visual Basic**–Label Control, Commandbutton Control, Textbox Control, Option Button Control, Frame Control, Checkbox Control, Listbox Control, Combobox Control, Image Control, Scroll Control, Picture Control, sing Timer Control, Drivelistbox Control, Dirlistbox, Filelistbox Control.

Unit – II:-Basic Programming Fundamentals– Scope of Variables, Operators, Decision Structure, Loop Structure, Arrays, control array. **Working With Procedure, Functions** Procedure, Functions, Modules **Menus** – Creating Menus, Creating Popup Menu. **Working With Custom Controls** – Imagelist Control, Imagecombo Control, Treeview Control, Listview Control, Toolbar Control, Statusbar Control.

Unit – III:-Creating MDI Applications – Features of Child Form, **Database Handling** – Creating the Database, Accessing the Database Using ADO Data Control. **Working With**

Advance Data Controls – Datalist Control, Datacombo Control, Datagrid Controls, Setting The Properties Of The Datagrid Control, Mshflexgrid Control,

Unit – IV:-Debugging Techniques – Error handling : Types of errors. Debugging, tools for debugging,handling runtime errors.**Working with Data Environment**-Data Environment and Data Report, Data Environment designer adding connection & commands Data reportcontrols, creating & printing reports.

Paper - IV

Course Name – Business Economics

Course Code – 3T4

COURSE OUTCOMES

CO1: The students will be able to **describe** the fundamental elements of relational database management systems

CO2: The students will be able to **summaries** the data models.

CO3: The students will be able to **apply** various normalization techniques for database design improvement.

CO4: The students will be able to **use** sql language for constructing and utilizing a database application.

CO5: The students will be able to **implement** an application using a database management system.

SYLLABUS:

UNIT – I:-Introduction: Concept of the System, Types of Decisions, Information System, Classification of information System, Conventional File Processing System, Database System, Components of Database Management System, Economic Justification of Database Approach.

Database Concepts: Introduction, Data, Information, Metadata, Terminologies of Files, Association between Fields, Association between Files (Record Types), File Organization.

UNIT – II:-Data Models: Introduction, Classification of Data Model, Entity Relationship Model. **Database Design:** Introduction, Steps of Database Design, Normalization, Case

Problem, Data Volume and Usage Analysis, Integrated Case Study-Database Design for Academic institution. **Implementation Design:** Introduction, Implementation Design,

UNIT – III:-Structured Query Language - I: Table fundamentals, viewing data in the tables, Eliminating duplicate rows when using a select statements, sorting data in a table, creating a table from a table, inserting data into a table from another table, delete operations, updating the contents of a table, modifying the structure of tables, renaming tables, truncating tables, destroying tables, creating synonyms.

UNIT-IV:-Structured Query Language - II: Data Constraints, Types of data constraints, defining different constraints on a table, computations done on table data, ORACLE functions, Date conversion functions, Data functions, Miscellaneous functions, Grouping data from tables in SQL, Subqueries, Joins, concatenating data from table columns, using the UNIONS, INTERSECT and MINUS clause.

Practical-I

Course Code-3P1

COURSE OUTCOMES

CO1: Students will be able to **create** simple applications using visual basic.

CO2: Students will be able to **develop** programs that take input from databases

CO3: Students will be able to **apply** sql for database definition and manipulation.

CO4: Students will be able to **perform** the join operation.

CO5: Students will be able to **establish** the database connection with an application.

Semester – IV

Paper - I

Course Name – Statistical Techniques

Course Code –4T1

COURSE OUTCOMES

CO1: The students will be able to **understand** the basic knowledge on data collection and various statistical elementary tools.

CO2: The students will be able to **identify** the type of statistical situation to which different distributions can be applied.

CO3: The students will be able to **find central tendency** in discrete and continuous series.

CO4: The students will be able to **evaluate** measures of skewness.

CO5: The students will be able to **apply** correlation-regression analysis.

SYLLABUS:

Unit – I:-Statistics and Measures of Central Tendency: – Meaning, Scope, Importance, Functions and Limitations of Statistics. Collection of data, Primary data and Secondary Data, Tabulation and Classification, Frequency distribution, Type of table, Mean, Median, Mode, Geometric Mean and Harmonic Mean (theory & Numerical)

Unit – II:-Measures of Dispersion: – Meaning and significance of dispersion. Method of measuring dispersion, Range, Mean Deviation, Standard Deviation, Quartile Deviation, Co-efficient of variation (Theory & Numerical)

Unit – III :-Skewness :- Meaning of Skewness, Type of Skewness, Factor of skewness. Absolute Measures of skewness, relative measures of skewness, Karl Pearson's co-efficient of skewness, Bowley's Co-efficient of skewness (Theory and Numerical)

Unit – IV:-Correlation and Regression:- Concept of correlation, Types of correlation, Karl Pearson's co-efficient of correlation, Probable error, Interpretation of "r", Rank correlation method. Concept of regression, Lines of Regression, Co-efficient of Regression (theory & Numerical)

Paper - II

Course Name – Business Law

Course Code –4T2

COURSE OUTCOMES

CO1: The students will be able to **draft** a legal contract.

CO2: The students will be able to **understand** legal aspect of trade in goods in physical as well as e-commerce industry.

CO3: The students will be able to **differentiate** between various negotiable instruments.

CO4: The students will be able to **understand the concept of** digital signature and electronic records.

CO5: The students will be able to **evaluate** the terms of sale and legal aspect of sale.

SYALLBUS:

Unit – I:-THE INDIAN CONTRACT ACT, 1872: Contract – meaning, characteristics and kinds, Essentials of a valid contract - Offer and acceptance, consideration, contractual capacity, free consent, legality of objects., Void agreements, Discharge of a contract – modes of discharge, breach and remedies against breach of contract, Contingent contracts, Quasi - contracts

Specific Contracts- Contract of Indemnity and Guarantee, Contract of Bailment, Contract of Agency

Unit – II:-THE SALE OF GOODS ACT, 1930 - Contract of sale, meaning and difference between sale and agreement to sell. Conditions and warranties, Transfer of ownership in goods including sale by a non-owner, Performance of contract of sale. Unpaid seller – meaning, rights of an unpaid seller against the goods and the buyer.

Unit – III:-THE INFORMATION TECHNOLOGY ACT, 2000 :- Definitions, Digital signature, Electronic governance, Attribution, acknowledgement and dispatch of electronic records, Digital Signatures Certificates, Duties of Subscribers, Penalties and adjudication, Appellate Tribunal, Offences

UNIT – IV:-THE NEGOTIABLE INSTRUMENTS ACT 1881 - Meaning, Characteristics, and Types of Negotiable Instruments - Promissory Note, Bill of Exchange, Cheque, Holder and Holder in Due Course, Privileges of Holder in Due Course. Negotiation: Types of Endorsements, Crossing of Cheque, Bouncing of Cheque.

Paper - III

Course Name – Core Java

Course Code –4T3

COURSE OUTCOMES

CO1: The students will be able to **define** concept related to java.

CO2: The students will be able to **demonstrate** the knowledge of object oriented concept in java programming.

CO3: The students will be able to **differentiate** between java programming and other programming languages.

CO4: The students will be able to **implement** the java concept for making window design.

CO5: The students will be able to **create** the new project using java.

SYLLABUS:

UNIT – I:- Java History and Introduction - Java history, Java features, how java differ from C and C++, Java and internet, Java and World Wide Web, Java environment. Simple Java programs, Java program structure, Java tokens, Java virtual machine, Command line arguments.

Variables, Data Types and Simple I/O –Variables, Data Types, and Scope of variables, Symbolic constants, Type casting, and Standards default values, Getting Simple User Input.

Operators in java- Introduction, Arithmetic operators, Relational operators, Logical operators, Assignment operators, Increment and decrement operators, Conditional operators, Bitwise operators, Special operators, Mathematical functions. **Decision Making and Branching** – If...Else statement, Nesting of If...Else statement, the switch statement, the?: Operators.

UNIT-II:-Decision Making and Looping – Introduction, The while statement, the do statement, for statement, Jumps in loops, Labelled loops. **Arrays, Strings** – One Dimensional Array, Two Dimensional Array, Strings. **Classes, Objects and Methods** – Introduction, Defining a class, Methods declaration, Creating objects, Accessing class members, Constructors, Method overloading, Static members, **Inheritance:** Extending a class, Overriding methods, Final variables and methods, Final classes, Finalizer methods, Abstract methods and classes, Visibility Controls. **Interfaces:**– Introduction, Defining interfaces, Implementing interfaces, Accessing interface variables.

UNIT – III:- Packages:– Introduction, Java API Packages, Using system packages, Naming conventions, Creating packages, Accessing a package, Using a package. **Introduction to Thread** - Creating threads, Life cycle of thread. **Managing Errors and Exceptions** – Introduction, Types of errors, Exceptions, Syntax of exceptions handling code, catch statements, using finally statements, throwing our own exceptions. **Graphics Programming** – Introduction, The graphics class, Lines and rectangles, Circles and ellipses, Drawing arcs, Drawing polygons.

UNIT-IV:-Applet Programming – Introduction, How applet differ from application, Preparing to write applet, Building applet code, Applet life cycle, Creating an executable applet, Designing a web page, Applet tag, Adding applet to HTML file, Running the applet, Passing parameters to applet, Displaying numerical values, Getting input from the user. **Managing Input / Output Files in JAVA** – Introduction, Concepts of streams, Streams classes, Bytes streams classes, Character streams classes, Using the file classes, Input / Output exception, Creation of files, Reading/Writing character, Reading/Writing bytes.

Paper - IV

Course Name –PHP & MySql

Course Code –4T4

COURSE OUTCOMES

- CO1:** The students will be able to **write** php script to handle the html forms.
- CO2:** The students will be able to **create** php scripts using various library functions.
- CO3:** The students will be able to **analyze** various database tasks using the php.
- CO4:** The students will be able to **design** and develop a complete web site.
- CO5:** The students will be able to **convert** static web site and turn into dynamic web site.

SYLLABUS:

UNIT- I:-Getting Started With PHP- Basic HTML Syntax, Basic PHP Syntax, Using FTP, Testing Your Scripts, Sending Text To The Browser, Adding Comment To The Script, Basic Debugging Steps. **Variables-** What Are Variables?, Variable Syntax, Types Of Variables, Variable Values, Understanding, Quotation Marks. **HTML Forms And PHP-** Creating A Simple Forms, Choosing A Form Data In PHP, Displaying Errors, Error Reporting. **Using**

Numbers-, Performing Arithmetic, Formatting Numbers, Understanding Precedence, Incrementing And Decrementing A Number, Creating Random Numbers.

UNIT- II:-Using Strings- Creating The HTML Forms, Concatenating Strings, Handling Newlines, HTML And PHP, Finding Substrings, Replacing Parts Of A String. **Control Structures-**The if Conditional, Validation Functions, Using Else, More Operators, Using else if, The Switch Conditional, The For Loop. **Using Arrays-** What Is An Array, Creating An Array, Adding Items To An Array, Accessing An Array From A Form.

UNIT- III:-Creating Web Applications- Creating Templates, Using Constants, Working With The Date And Time, Handling HTML Forms With PHP, Sending Email. **Cookies And Sessions-** What Are Cookies?, Creating Cookies, Reading From Cookies, Adding Parameters To Cookies, Deleting A Cookie, What Are Sessions?, Creating Session, Accessing Session Variables, Deleting Session. **Creating Functions-** Creating And Using Simple Functions, Creating And Calling Functions That Take Arguments, Setting Default Arguments Values, Creating And Using Functions That Return A Value, Understanding Variable Scope.

UNIT- IV:-Files And Directories- File Permissions, Writing To Files, Locking To Files, Reading From Files, **Introduction To Database-** Introduction To SQL, Connecting To MYSQL, MYSQL Error Handling, Creating And Selecting A Database, Creating A Database, Inserting Data Into A Database, Securing Query Data, Retrieving Data From A Database, Deleting Data In A Database, Updating Data In A Database. **Putting It All Together-** Getting Started, Connecting To The Database, Writing The User-Defined Function, Creating The Template, Adding Quotes, Listing Quotes, Editing Quotes, Deleting Quotes.

Practical-I

Course Code-4P1

COURSE OUTCOMES

CO1: Students will be able to **use** java classes in real time application.

CO2: Students will be able to **develop** a web page using an applet.

CO3: Students will be able to **implement** the java packages.

CO4: Students will be able to **create** dynamic web sites

CO5: Students will be able to **work** with sessions and cookies.

BCCA – Part – III

Semester – V

Paper - I

Course Name –Computerized Accounting Using Tally

Course Code –5T1

COURSE OUTCOMES

CO1: The students will be able to **define** basics of accountancy, its principles concepts.

CO2: The students will be able to **describe** the computerized accounting systems using tally erp.9.

CO3: The students will be able to **demonstrate** the Indian tax structure. Also print financial statements, etc. in tally erp.9 software

CO4: The students will be able to **create** company; enter accounting voucher entries etc. in tally erp.9.

CO5: The students will be able to **calculate** the gst using tally erp.9.

SYLLABUS:

UNIT I :-Introduction to Tally.ERP 9- Basics of Accounting-Types of accounts-Golden rules of accounting –Accounting principles –Features of Tally- Opening Tally.ERP 9, Components of the Tally.ERP 9 Window, Creating a Company. Accounting masters in Tally –F11: Features – F12 Configurations –Setting up of Account Heads.

UNIT II - Introducing Vouchers, Introducing Purchase Orders, Introducing a Sales Order, Introducing Invoices.**Stock and Godown in Tally-** Stock Groups, Stock Categories, Stock Items, Units of Measure, Godowns.

UNIT III:-Stock and Godown in Tally-Cost Centers and Cost Categories–Bank Reconciliation –Interest Calculations. **Reports in Tally.ERP 9-** Working with Balance Sheet, Working with Profit & Loss A/c Report, Working with Stock Summary Report, Understanding Ratio Analysis, Working with Trial Balance Report, Working with Day Book Report.

UNIT IV :-Taxation – Indian Tax Structure, Tax deducted at source in tally.ERP 9, Create a Tax Ledger, TDS Vouchers, Printing a TDS Challan, Tax collected at source in Tally.ERP 9, TCS reports in Tally.ERP 9, Calculating GST in Tally.ERP 9, GST Classification, GST Vouchers, GST Reports in Tally.ERP 9. Taking Backup in Tally.ERP 9, Restoring Data inTally.ERP

Paper - II

Course Name –VB.NET

Course Code –5T2

COURSE OUTCOMES

CO1: The students will be able to **define** background knowledge of .net.

CO2: The students will be able to **demonstrate** the knowledge of object oriented programming and applications in vb.net

CO3: The students will be able to **develop** windows form applications

CO4: The students will be able to **analyze** the problem and develop menu, submenu, dialog box, status bar.

CO5: The students will be able to **build** vb.net applications using visual studio.

SYLLABUS:

UNIT- I:-Welcome to Visual Basic.NET – Windows Versus DOS Programming, Installing Visual Basic.NET, The Visual Basic.NET IDE, Creating a Simple Application, Using the Help System. **The Microsoft.NET Framework** – Microsoft’s Reliance on Windows, Writing Software for Windows, Common Language Runtime, The Common Type System and Common Language Specification. **Writing Software** – Information and Data, **Variables**, Comments and Whitespaces, Data Types, Sorting Variables, Methods. **Controlling the Flow** – Making Decisions, The if Statement, Select Case, Loops. 9.

UNIT- II :-Working with Data Structure – Understanding Array, Understanding Constants, Structures, Working with Collection and Lists, Advanced Array Manipulation. **Building Windows Application** – Responding to Events, Building a Simple Application, Creating

Complex Applications, Using Multiple Forms. **Displaying Dialog Boxes** – The MessageBox Dialog box, The OpenFileDialog Control, The SaveDialog Control, The FontDialog Control, The ColorDialog Control, The PrintDialog Control.

UNIT- III :-Creating Menu – Understanding Menu Features, Creating Menu, Context Menu. **Debugging and Error Handling** – Major Error Types, Debugging, Error Handling. **Building Objects** – Understanding Objects, Reusability, Our First Object, Constructor, Inheritance, The Framework Classes.

UNIT- IV :-Accessing Database – What is Database, SQL Select Statement, Queries in Access, Data Access Components, Data Binding. **Database Programming with SQL Server and ADO.NET** –ADO.NET, The ADO.NET Classes in Action, Data Binding. **Deploying Your Application** – What is Deployment?, Creating a Visual Studio .NET Setup Application, Assemblies as Installers, The Core of Deployment, Deploying Different Solution.

Paper - III

Course Name –System Analysis and Design

Course Code –5T3

COURSE OUTCOMES

CO1: The students will be able to **define** concept and approaches of system analysis and design.

CO2: The students will be able to **applying** the tools and techniques of system analysis for organizational design in practice.

CO3: The students will be able to **analyze** design system components and environment.

CO4: The students will be able to **design and develop** of information systems in real world business environment

CO5: The students will be able to **create** projects that require the integration of project management principles through team work.

SYLLABUS:

UNIT- I:-System Concept and the Information Systems Environment- Introduction, the Systems Concept, Characteristics Of A System, Elements Of A System, Types Of A System. **The System Development Life Cycle-**Introduction, System Development Life Cycle,

Considerations for the Candidate System, Prototyping. **The Role Of System Analyst-** Introduction, Definition, Historical Perspective, The Multifaceted Role Of The Analyst, The Place Of The Analyst In The MIS Organization, Rising Positions In System Development, Conclusions.

UNIT- II :-System Analysis- System Planning And The Initial Investigation- Introduction, Bases For Planning In System Analysis, Initial Investigation. **Information Gathering-** Introduction, What Kinds Of Information Do We Need?, Where Does Information Originate?, Information Gathering Tools. **The Tools Of Structured Analysis-** Introduction, What Is Structured Analysis? The Tools of Structured Analysis. **Feasibility Study-** Introduction, System Performance Definition, Feasibility Study.

UNIT- III :-System Design- The Process And Stages Of System Design- Introduction, The Process Of Design, Design Methodologies, Major Development Activities, Audit Consideration. **Input/output and Forms Design-** Introduction, Input Design, Output Design, Forms Design. **File Organization and Data Base Design-** Introduction, File Structure, File Organization, Data Base Design, the Role of the Data Base Administrator.

UNIT- IV:-System Implementation- System Testing And Quality Assurance- Introduction, Why System Testing?, What Do We Test For?, The Test Plan, Quality Assurance, 64 Trends In Testing, Role Of Data Processing Auditor. **Implementation And Software Maintenance-** Introduction, Conversion, Combating Resistance To Change, Post-Implementation Review, Software Maintenance. **Hardware/ Software Selection -** Introduction, The Computer Industry, The Software Industry, A Procedure For Hardware/ Software Selection, Financial Considerations In Selection, The Used Computer, The Computer Contract.

Paper - IV

Course Name –Cost and Management Accounting

Course Code –5T4

COURSE OUTCOMES

CO1: The students will be able to **define** the importance of management accounting for business

CO2: The students will be able to **understand** the relation between cost accounting-financial accounting and managerial accounting

CO3: The students will be able to **analyze** the relationship between the cost volume and profit costing.

CO4: The students will be able to **apply** break-even point.

CO5: The students will be able to **comment** on financial health of business using ratio analysis.

SYLLABUS:

UNIT- I:- Cost Accounting Meaning, Scope, Objective, Importance, Features of cost accounting, Function of Cost Accounting, Advantage, Element of cost, Cost-Absorption, Allocation of overheads and Methods of costing, Type of Costing, Difference between cost Accounting and Financial Accounting. Problems on Cost Sheet, Tender and Quotations. (Theory and Numerical)

UNIT- II:- Process Cost Accounting Definition, Features of Process costing, Advantages of Process costing, Limitations of process costing, Wastage and By-products, Normal Loss, Abnormal Loss/Gain, Joint Products, Difference between Process cost and Job cost. Problems on Process costing

UNIT- III :- Management Accounting Meaning, Definitions, Characteristics and Nature of Management Accounting, Objective, Importance, Functions of Management Accounting, Advantage and Limitations of Management Accounting, Difference between management Accounting and Cost Accounting, Difference between Financial Accounting and Management Account. Break-Even Point Analysis (Theory and Numerical)

UNIT- IV: - Ratio Analysis Meaning, Importance, Limitations of Ratio Analysis, Use and Significance of Ratio Analysis, Classification of Ratio, Computation of Profitability Ratio,

Financial Ratio with special reference to Current Ratio, Liquid Ratio, Inventory turnover Ratio, Debtors and Creditors turnover Ratio, Fixed Assets turnover Ratio, Debt-Equity Ratio, Working Capital Ratio, earnings per share Ratio, Gross Profit Ratio, Net Profit Ratio, expenses Ratio, Operating Ratio.

Practical-I

Course Code-5P1

COURSE OUTCOMES

CO1: Students will be able to **define** the basics of accountancy, its principles, concepts.

CO2: Students will be able to **demonstrate** an understanding of basic concepts like ledger, groups and vouchers.

CO3: Students will be able to **create** company, enter accounting voucher entries.

CO4: Students will be able to **analyze** and resolve problems in vb.net window based application.

CO5: Students will be able to **write** the vb.net code for a given algorithm.

Semester – VI

Paper - I

Course Name –C#

Course Code –6T1

COURSE OUTCOMES

CO1: The students will be able to **define** background knowledge of .net and in c#.

CO2: The students will be able to **demonstrate** the knowledge of object oriented programming and applications in c#.

CO3: The students will be able to **develop** windows form applications.

CO4: The students will be able to **analyze** the problem and develop delegates, events, web form.

CO5: The students will be able to **build** c# .net applications using visual studio.

SYLLABUS:

UNIT – I:-Introducing C# - What is C#?, Evaluation of C#, Characteristics of C#, Application of C#, How does C# Differ from C++?, How does C# Differ from Java?. **Understanding.NET: The C# Environment** –The.NET Framework, The Common Langue Runtime, Framework Base Class,.NET Languages, Benefits of the .NET Approach, C# and .NET. **Overview of C#** -

Introduction, A Simple C# Program, Namespaces, Adding Comments, Using Aliases for Namespaces Classes, Passing String Objects to WriteLine Method, Command Line Argument, Main with Class, Providing Interactive Input, Multiple Main Methods, Compile Time Error. **Literals, Variables and Data Types** –Introduction, Literals, Variables, Data Types, Value Types, Reference Type, Declaration Types, Initialization of Variables, Default Value, Constant Variable, Scope of Variables, Boxing and Unboxing. **Operators and Expressions** – Introduction, Operator Precedence and Associativity, Type Conversion,

UNIT - II:-Decision Making and Branching –Introduction, Decision Making with if Statement, Simple if Statement, The if...else Statement, The else if Ladder, The Switch Statement, The? : Operator, Decision Making and Looping – Introduction, The while Statement, The do Statement, for Statement, The for each Statement. **Methods in C#** - Introduction, Declaring Methods, The Main Method, Invoking Methods, Nesting of Methods, Method Parameters, Pass by Value, Pass by Reference, The Output Parameters, Variables Argument List, Methods Overloading. **Handling Arrays** – Introduction, One-Dimensional Array, Creating an Array, Two-Dimensional Array, Variable-Size Arrays,. **Manipulating Strings** – Introduction, Creating String, String Methods, Inserting String, Comparing String, Finding String, Mutable String Arrays of String,

UNIT – III:-Structures and Enumerations –Introduction, Structures, Structs with Methods, Difference between Classes and Structs, Enumerations, Enumerator type Conversion. **Classes and Objects** - Introduction, Basic Principle of OOP, Defining a Class, Adding Variables, Adding Methods, Member Access Modifiers, Creating Objects, Accessing Class Members, Constructors, Overloaded Constructors, Static Members, Static Constructors, Private Constructors, Copy Constructors, Destructors, Member Initialization, The This Reference, Nesting of Members, Constant Members, Read-only Members, Properties, Indexers. **Inheritance and Polymorphism** – Introduction, Classical Inheritance, Defining a Subclass, Visibility Control, Defining Subclass Constructors, Multilevel Inheritance, Hierarchical Inheritance, Overriding Methods, Abstract method, Sealed Class: Preventing Inheritance, Sealed Methods, Polymorphism.

UNIT – IV:-Interface: Multiple Inheritance–Introduction, Defining an Interface, Extending Interface, Implementing Interface, Interface and Inheritance, Explicit Interface Implementation, Abstract Class and Interface. **Operator Overloading** – Introduction, Overloadable Operators, Need for Operator Overloading, Defining Operator Overloading, Overloading Unary Operator, Overloading Binary Operator, Overloading Comparison Operator. **Managing Errors and Exceptions** – Introduction, What is Debugging?, Types of Errors, Exceptions, Syntax of Exception Handling Code, Multiple Catch Statements, The Exception Hierarchy, General Catch Handler, Using Finally Statement, Nested Try Blocks, Throwing Our Own Exceptions, Checked and Unchecked Operators, Using Exceptions for Debugging.

Paper - II

Course Name –Python

Course Code –6T2

COURSE OUTCOMES

CO1. The Student will be able to **define** the structure and component of python program.

CO2. The Student will be able to **describe** why python is a useful scripting language for developers.

CO3. The Student will be able to **design** python program.

CO4. The Student will be able to **differentiate** python language and other language.

CO5. The Student will be able to **develop** new project using python programming.

SYLLABUS:

UNIT - I :-Getting Started -Introducing python, Installing python on windows, Installing python on Linux, Meeting the interpreter, Writing your first program, Employing variables, Obtaining user input, Correcting Errors. **Performing operations**-Doing arithmetic, Assigning values, Comparing Values, Assessing logic. , Examining Conditions, Setting precedence, casting data types, Manipulating bits. **Making statements** -Writing lists, Manipulating lists, Restricting lists, associating list elements, branching with if, looping while true, Looping over items, Breaking out of loops.

UNIT - II:-Defining Functions-Understanding scopes, Supplying arguments, Returning Values, Using callbacks, Adding placeholders, producing generators, Handling exceptions, Debugging assertions. **Importing Modules** - ,Storing functions, Owing function names, Interrogating the system, Performing mathematics, Calculating decimals, Telling the time, Running a timer, Matching patterns.

UNIT – III:-Managing strings -Manipulating strings, Formatting strings, Modifying strings, Accessing files, Reading and writing files, Updating file strings, Pickling data Programming objects, Encapsulating data, Creating instance objects, Addressing class attributes, Examining built-in attributes, Collecting garbage, Inheriting features, Overriding base methods, Harnessing polymorphism.

UNIT - IV Processing requests-Sending responses, Handling values, Submitting forms, Providing text areas, Checking boxes, Choosing radio buttons, Selecting options, Uploading files
Building interfaces-Launching a window, Responding to buttons, Displaying messages, Gathering entries, Listing options, Polling radio buttons, Checking boxes, Adding images
Developing applications- Generating random numbers, Planning the problem, Designing the interface, Assigning static properties, Initializing dynamic properties, Adding runtime functionality, Testing the program, Freezing the program, Deploying the application.

Paper - III

Course Name – Entrepreneurship Development

Course Code –6T3

COURSE OUTCOMES

CO1. The Student will be able to **understand** concepts and functions of the entrepreneur.

CO2. The Student will be able to **identify** personal attributes that enable best use of entrepreneurial opportunities.

CO3. The Student will be able to **analyze** meaning and need for financial planning, source of finance.

CO4. The Student will be able to **evaluate** the entrepreneurial support in India.

CO5. The Student will be able to **apply** knowledge of how to start one's own business

SYLLABUS:

UNIT-I:-Entrepreneur: Introduction, Evolution of the concept of Entrepreneur, Characteristics of successful Entrepreneurs, The charms of becoming Entrepreneur, The Entrepreneurial decision process, Functions of Entrepreneur, Need of Entrepreneur, Types of Entrepreneurs, Distinction between an Entrepreneur and a Manager, Intrapreneur, social Entrepreneur.

Entrepreneurship: Concept of Entrepreneurship, Growth of Entrepreneurship in India, Role of Entrepreneurship in economic development. Types of Entrepreneurship, Family Business

UNIT-II:-Agri-Preneurship: Introduction, Need for developing Agri-Preneurship in India, Opportunities for developing Agri-Preneurship, Challenges involved in developing Agri-Preneurship. **Factors affecting Entrepreneurship growth:** Factors affecting Entrepreneurship, Government Actions. **Entrepreneurial Motivation:** Meaning of Entrepreneurial Motivation, Motivational Cycle or Process, and Theories of Entrepreneurial Motivation. **Entrepreneurial Competencies:** Meaning of Entrepreneurial Competency, Major Entrepreneurial Competencies, Developing Entrepreneurial Competencies.

UNIT - III :-Entrepreneurship Development Programmes (EDPs): Meaning of EDP, Need of EDPs, Objectives of EDPs, Entrepreneurship Development Programmes in India: A Historical Perspective, Course contents and curriculum of EDPs, Phase of EDP, Evaluation of EDPs, and Problems of EDPs. **Micro and small enterprises:** Small enterprise: Meaning & Definition, Essentials, features & Characteristics, Relationship between Micro and Macro enterprises, Rationale behind Micro & small enterprises, Role of Micro enterprise in economic development, Package for promotion of Micro and Small-scale enterprise. **Formulation of Business Plans:** Meaning of business plan, Contents of business plan, Significance, Formulation of business plan, Network Analysis, Common Errors in business plan formulation.

UNIT – IV:-Project Appraisal: Concept of Project Appraisal, Methods of Project Appraisal, and Environmental clearance of SMEs. **Financing of Enterprise:** Meaning and need for financial planning, Source of Finance, Capital Structure, Capitalization, Term Loans, Sources of

short-term Finance, Venture Capital, Export Finance. **Forms of business Ownership:** Sole Proprietorship, Partnership, Company, Cooperative, And Selection of an appropriate form of ownership structure, **Institutional Finance of entrepreneurs:** Need for institutional finance, Institutional Finance. **Institutional Support to Entrepreneurs:** Need for institutional support, Institutional Support to small Entrepreneurs.

Practical-I

Course Code-6P1

COURSE OUTCOMES

CO1: Students will be able to **understand** code solutions and compile c# programs within the .net framework.

CO2: Students will be able to **demonstrate** knowledge of object oriented concepts and functional requirements of c#.net applications.

CO3: Students will be able to **develop** console and window based .net applications.

CO4: Students will be able to **explain** basic principles of python programming language.

CO5: Students will be able to **implement** database and GUI application in python

Project

Course Code-6P2

COURSE OUTCOMES

CO1: Students will be able to **demonstrate** a sound a technical knowledge of their selected project topic.





CO2: Students will be able to **prepare** the formal report describing the work under taken and result obtained.

CO3: Students will be able to **understand** techniques for project planning, scheduling and execution.

CO4: Students will be able to **analyze** risk management plan.

CO5: Students will be able to work effectively in team and **demonstrate** team building capabilities.

FACULTY DETAILS:

| Sr. No. | Photo | Name | Designation | Education |
|----------------|------------------------------------------------------------------------------------|--------------------|------------------------------|-----------------------------------------------------|
| 1 |  | Prof.Mona Chandak | Coordinator & Adhoc Lecturer | M.Sc., B.Ed. ,MCM |
| 2 |  | Dr.Rita Bhaisare | Assistant Professor | M.A.(History),P.G.D.C.CA.,MCM, M.Phil., M.Com, PHD. |
| 3 |  | Prof.Pooja Jaiswal | Adhoc Lecturer | MCA,MCM |
| 4 |  | Prof.Punam Bangade | Adhoc Lecturer | M.Sc.,M.Phil., B.Ed. ,MCM |