

SYLLABUS FOR COMPUTER APPLICATION (OPTIONAL  
GROUP)

**B.Com. Semester - I and Semester – II**

(From Session 2014-15 & onwards)

SEMESTER - I

<b>S.No.</b>	<b>Subject</b>	<b>Max. Marks</b>
1	Computer fundamentals & operating system	85
2	CCE	15
	<b>Total Marks</b>	<b>100</b>

SEMESTER - II

<b>S.No.</b>	<b>Subject</b>	<b>Max. Marks</b>
1	PC Package	50
2	Practical	35
3	CCE	15
	<b>Total Marks</b>	<b>100</b>

B.Com. – Semester I  
Paper Title:- Computer Fundamentals And Operating system

Marks 85 Max  
15 CCE-

Unit-I

What is computer, evolution of Computers, their classification & limitations, Generation of Computers in modern Society, Characteristics and Types of desktop, Laptop, Notebook, Palmtop, Workstation. Block diagram of computer processing system,, CPU( Control Unit, ALU Register) Introduction to number systems( Binary, Octal & Hexa decimal) character codes (BCD, EBCDIC ASCII), Introduction to software and types of software.

Unit-II

Input devices and functions-Keyboard, Mouse, Track ball, Joystick,,Digitizer, Tablet, Scanners, Digital Camera, OMR, OCR Barcode reader, Voice Input System Light Pen, Touch Screen. Output Devices and Functions-Characteristic & Type of Monitor, VGA, SVGA, XVGA, LCD Screen etc. Printers-impact & Non Impact printers, Character Printer, Line Printer Page Printer, Plotter.

Unit-III

Memory-Primary (RAM, Dynamic and Static RAM, ROM,PROM,EPROM, EEPROM, Cache, Virtual, Extended and Expanded) and Secondary Memory (Floppy disk and Hard Disk with details of cluster,FAT, track) Power supply and Distribution. Storage Devices-Function of storage devices-Magnetic Tape, Hard disk Drives,Pen Drives, Floppy Disk, CD, VCD, CDR, CD-RW, DVD,DVD-RW.

Unit-IV

What is an operating System, Types of operating system with examples single user (MS-DOS) and Mulit-user (UNIX) Functions of operating systems-Memory management, CPU Management, File management, I/O Device Management, Data Management, time sharing, Security, Communication. Wild cards, relative and absolute path, Booting System (ROM BIOS,POST, io.sys msdos.sys, Autoexes.bat Configuration systems, Commands.Com)Internal and External Commands with syntax, Internal Commands-CLS, DATE, TIME MD, CD, RD, DEL PROMPT, TYPE, COPYCON, DIR, REN, DELETE, COPY, External Commands, CHKDSK, Scandisk, Mem, Attrib, X-copy, Disk-copy, Disk-comp, Backup, Restore etc.

Unit-V

Introductions to Windows XP, Parts of Windows screen, Desktop Icons, Windows, Anatomy of a Window, The title bar, Minimize and Maximize Button. The control Box,

Scroll Bars, Scroll Buttons and Scroll Boxes, Changing Screen Saver and Background, Application and Document Windows Changing Date & Time. My computer, My Documents, Recycle Bin, Creating Folder, Windows Explorer Searching, Moving files, Copy, Delete and Rename files, Creating Shortcuts.

#### Reference Books

- 1- Windows Based Computer Courses, Gurvinder Singh ,English
- 2- Fundamentals of Information Technology, Chetan Srivastave,English
- 3- Fundamentals of Computer, Rajaraman,English
- 4- Fundamentals of Computer, A Mansoor (pragya) Hindi/English

# SEMESTER SYSTEM SYLLABUS

## B.Com. – Semester II Paper Title:- PC Package

Max Marks :-50

CCE-15

Practical-35

### Unit - I

Introduction to MS-Word, Parts of MS-Word Windows( Title Bar, Menu Bar, Tool Bar, Ruler, Status Area) Creating New Documents, Opening an Existing Document, Find and Replacing, Moving & Copying Text, Page Setup, Margins & Gutters, Creating a document using Templates & Wizards.

Text Formatting – Changing Fonts & Font Size, Make Text Bold, Italic & Underline, Spacing, Centre, Right & Left Alignment, Page Breaks, Headers & Footers. Saving documents.

### UNIT – II

Spell checking, Printing, Creating a table using Table Menu – Entering & Editing Text, Selecting, Adding & Deleting Rows & Columns, Changing & Shading Templates and Wizards, Working with Graphics. Drawing Objects, Using frames to position objects, Mail Merge.

### UNIT – III

Introduction to MS-EXCEL, Creating a simple Worksheet, Entering data into Worksheet, Computations in Worksheets, Printing the Worksheets, Creating Graphs & Charts, What if analysis (Data Sort, Fill, Query, Filter) Copying, Renaming, Moving, Adding & Deleting Worksheet.

Using Formulas and Functions – Formula, Characteristics of Formula, Entering Formula, Copying Formulas, Types of Functions (date, mathematical, logical, statistical), Function Wizard, Formatting of Using Autoformat.

### UNIT – IV

Introduction to MS-POWERPOINT, PowerPoint elements templates, Wizards, Views & Color Schemes, Exploring PowerPoint Menu, Adding Text, Adding Title, Adding Text Area, Resizing text boxes, Adding and starting a New Slide, Slide Transition effects & other animation effects, Starting a Slide Show, Saving Presentation, Printing Slide, Display of Slide Show.

## UNIT – V

Introduction to Pagemaker, Title Bar, Menu Bar, Tool Box, Preparation of documents using Pagemaker, Master Page, Page Setup, Margin, Ruler & Guides, Formatting fonts & Character Sets, Drop Cap, Spelling Check & find and replace, Various types of palette (Color, Control, Style), Various types of printers used in Pagemaker.

### **Reference Books:-**

1. Windows based Computer Courses- Gurvinder Singh, English
2. PC Software – Nitin K.Naik, Hindi
3. MS Office 2000 – A. Mansoor, Hindi/ English ( Pragya Publication)
4. Pagemaker – Rajeshwar Shukla, Hindi/ English (Pragya Publication)

SYLLABUS FOR COMPUTER APPLICATION (OPTIONAL  
GROUP)

**B.Com. Semester - III and Semester – IV**

(From Session 2014-15 & onwards)

SEMESTER - III

<b>S.No.</b>	<b>Subject</b>	<b>Max. Marks</b>
1	Programming in C++	85
2	CCE	15
	<b>Total Marks</b>	<b>100</b>

SEMESTER - IV

<b>S.No.</b>	<b>Subject</b>	<b>Max. Marks</b>
1	Relational Database Management System	50
2	Practical	35
3	CCE	15
	<b>Total Marks</b>	<b>100</b>

# **COMPUTER APPLICATION (OPTIONAL GROUP)**

## **SEMESTER - III**

### **PROGRAMMING IN C++**

**Max Marks : 85**

**CCE:-15**

#### **UNIT - I**

Algothritms for Problem Solving Flowchart, Flowchart Symbols, Rules of Flowcharting,example of flowchart, what is programming, modular programming,procedure oriented programming,

Object oriented programming concept : Class, Object, Data abstraction & Encapsulation, Inheritance, Polymorphism & Message Passing, Benefits of OOPS.

#### **UNIT - II**

Programming ++ - Structure of C++ Programme, Elements of C++ Tokens, identifiers, data types ++, Constants and its types Standard input and standard output Statements output – cout , Use of << and >> operators

Control Structure ++ (Sequence Selection and Iteration) , Structured datatypes ++ arrays, What is Function , recursive function , Inline Function.

#### **UNIT – III**

Structure of class , declaration of class , member function, declering function outside of class , Constructors , default constructor , constructor overloading, Destructors , Friend function , polymorphism - Virtual Function , this pointer.Create programe using class.

#### **UNIT – IV**

What is function Overloading , rules for function overloding , function Operator overloading- Rules for Operator overloading, Overloading Unary Operator, Overloading Binary Operator, overloading assignment operator Pointers : Declaration and Initialization of Pointers

#### **UNIT – V**

Inheritance : Introduction , types of derivation – public , private , protected inheritance. Types of Inheritance (Simple, Multilevel, Multiple, Heirarchical and Hybrid). Create program using inheritance.

**Reference Books -**

- Programing ++ - Balaguruswami, English
- Programming with C++ (2<sup>nd</sup>) – D. Ravi Chandran
- C++ Programming - Hemant Kumar Goyal, H

**LIST OF PRACTICALS**

- Write a program to find average of 3 numbers.
- Write a program to find biggest among 3 numbers.
- Write a menu driven program (Switch case) to perform arithmetic operations.
- Write a program to check whether entered number is Prime or not.
- Write a program to check whether entered number is even or odd.
- Write a program for addition of two matrixes.
- Write a program for multiplication of two matrixes.
- Write a program to find transpose of a matrix.
- Write a program to print :
  - \*
  - \*
  - \*
- Write a program to print :
  - \*
  - \*
  - \*
- Write a program to print :
  - 1
  - 2 2



- 3 3 3
- Write a program to print :
  - 1
  - 2 3
  - 4 5 6
- Write a program to check whether entered string is palindrome or not.
- Write a program to print Fibonacci series.
- Write a program to find factorial of a given number.
- Write a program to demonstrate use of static data member.
- Write a program to demonstrate use of a static member function.
- Write a program to create array of objects.
- Write a program to demonstrate use of friend function.
- Write a program to illustrate use of copy constructor.
- Write a program to demonstrate constructor overloading.
- Write a program to illustrate use of destructor.
- Write a program to overload a unary operator.
- Write a program to overload a binary operator.
- Write a program to demonstrate single Inheritance.
- Write a program to demonstrate multiple Inheritance.
- Write a program to demonstrate multilevel Inheritance.
- Write a program to demonstrate hierarchical inheritance.
- Write a program to demonstrate hybrid Inheritance.
- Write a program to demonstrate the use of function overloading.
- Write a program to demonstrate the use of inline member function.

- Write a program to demonstrate the use of parameterized constructor.
- Write a program to Check wheather entered string is palindrome or not.

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**SEMESTER - IV**  
**RELATIONAL DATA BASE MANAGEMENT SYSTEM**

**MAX MARKS – 50**  
**PRACTICAL – 35**

**CCE-15**  
**UNIT - I**

Introduction to Data Base, Database files, records & fields, problems with manual database, using computers for database, categorization of DBMS systems (Networks, Hierarchical & Relational databases , what is RDBMS, Application of RDBMS system, Advantages and limitations over DBMS,

**UNIT - II**

Definition of CODD's rules, Important components-database manager, DDL, DML, DCL, query processor, data dictionary, concept of entities, attributes & relationships, ER diagrams, basic concept associated with Normal forms.

**UNIT - III**

Introduction to ORACLE,oracle architecture and product history,. Introduction to SQL, SQL operators, data types DDL commands(create table, alter table, drop table, create view, rename, create index) DML commands of SQL, (select distinct, select from where, select from where order by, select group by clause, select group by having clause, insert into, update, delete) DCL commands of SQL (Rollback, revoke, grant).

**UNIT - IV**

SQL aggregate functions (sum, avg, max, min, count) SQL Character functions (Lower, upper, length, substr, RPAD, LPAD) SQL arithmetic functions (Round, trunc, sqrt, mod, abs, sine) conversion functions and other miscellaneous functions. Joining Multiple Tables (equi joins), Joining a table to itself (self join), subqueries union, intersects and minus clause.

**UNIT - V**

Report using SQL plus (specifying column heading, formatting columns char formats, break, inserting spaces after every row, break on multiple column with different spacing, page size, line size, pause).

Introduction of PL/SQL, PL/SQL datatypes, Using PL/SQL Blocks in the SQL\*plus Environment ,control statements(if-the-else,loop,while-loop,for-loop) ,error

handling in PL/SQL, introduction to cursor handling,types of cursor(Explicit Cursor & Implicit Cursor),general cursor attributes.

### Reference Books -

1. Oracle 8i - Freeman & Blomberg, English
2. Siplified approach to Oracle- Prateek Bhatia,Sanjiv Datta,Ranjit Singh
3. Oracle & Developer 2000 - Ivan Bay Rose, English
4. A to Z Oracle - Hemant Kumar Goyal, Hindi

### LIST OF PRACTICALS

Write a pl/sql block to check whether entered year is a leap year or not.

Create a user defined procedure to find number of vowels in a given word.

Write a pl/sql block to find factorial of any given number.

Write a pl/sql block to create a trigger for update or insert on ename field of emp table. The trigger will make the entries of ename field in uppercase.

Write a pl/sql block to greater number among three numbers.

Write a pl/sql block to create a trigger for update or insert on ename field of emp table. The trigger will make the entries of ename field in uppercase.

Write a pl/sql block to find factorial of any given number.

Create a procedure that accepts two numbers and return addition, subtraction , multiplication & division of two numbers. (local procedure)

Write a pl/sql block for creating a cursor in which the salary of employees of deptno--20 is increased by 0.05 . When such raise is given ,the record for the same should be maintained in emp\_raise table with fields empno, date & actualraise.

Write a pl/sql block to print fibnoccai series 0 1 1 2 3 5 8....

Write a pl/sql block that first insert a record in an emp table . Increase the salaries of blake &clark by rs. 2000 & rs.1500. Then check to see that total salary doesnt exceed rs.20,000. If the total salary is greater than 20,000 then undo the updates made to the salaries of blake &clark .

Emp table:-

empno	emp_name	salary
E001	harry	5000
E002	blake	1000
E003	jack	5000
E004	clark	1000

Write the steps to create a form.

Write a pl/sql block to create table of any number.

Write a pl/sql block to find hcf of two positive numbers

Write a pl/sql block to calculate sum of digits  $583 = 5+8+3= 16$

Write a pl/sql block to create a trigger for update or insert on ename field of emp table.  
The trigger will make the entries of ename field in uppercase

Create the table client\_master

Fieldname	datatype	size
Client_no	varchar2	6
Name	varchar2	20
Address	varchar2	30
City	varchar2	10
Phone	number	10

Enter 5 records

Find out the names of all the clients.

Retrieve the entire content of client\_master table.

List all the clients who are located in bombay.

Change the city of client\_no 'c005' to bombay.

Add a column "salary" of datatype 'number' and size 5 to Client\_master table.

Write a pl/sql block to calculate sum of digits  $583 = 5+8+3= 16$

Create a procedure that accepts two numbers and return addition, subtraction ,  
multiplication & division of two numbers. (local procedure)

Write a pl/sql block to check whether entered year is a leap year or not.

SYLLABUS FOR COMPUTER APPLICATION (OPTIONAL  
GROUP)

**B.Com. Semester - V and Semester –VI**

(From Session 2014-15 & onwards)

SEMESTER - V

<b>S.No.</b>	<b>Subject</b>	<b>Max. Marks</b>
1	E-Commerce and Accounting Package	85
2	CCE	15
	<b>Total Marks</b>	<b>100</b>

SEMESTER - VI

<b>S.No.</b>	<b>Subject</b>	<b>Max. Marks</b>
1	Programming with VB.NET	40
2	Major Computer Project +Practical	50
3	CCE	10
	<b>Total Marks</b>	<b>100</b>

**B.com VSem**  
**E-Commerce and Accounting package**

**Max. Marks-85**  
**CCE-15**

**Unit –I**

Introduction to internet, web browsers, www, types of network-lan, wan,e-mail basics-working with email

how to send and receive emails, search engine.

e-commerce:-business operations-commerce practices vs traditional business practices, benefits of e-

commerce to organization, consumers and society, limitation of e-commerce, management issues relating to e-

commerce

**Unit – II**

Operations of e-commerce, credit card transaction, secure hypertext transfer protocol, electronic payment

system, secure electronic transaction, broker based service, online travel tourism services, benefits and

impacts of e-commerce on travel industry, real estate market, online stock trading and its benefits , online

banking and its benefits

**Unit – III**

Introduction to e-governance ,EDI in governance , e-government, e- governance application of the internet,

concept of government to business, business to government and citizen to government,e-governance models.

**Unit- IV**

Accounting information system-basic of accounting practices and preparation of final accounts, introduction

to computerized accounting information system .distinction between manual and computerized accounting

information system, accounts payable system, accounts receivable system

Introduction to tally, creating new company ,creation of groups and accounts, making voucher entries,

working with date and all menus of tally package, generation of reports, recording of inventory,

**Unit – V**

Basic concepts of inventory tally configuration, single and multiple user, tally screen components,

mouse/keyboard conventions and key combination, switching between screen areas, quitting tally, maintaining

company data, basic company details. Create/alter/select/load/close a company, chart of accounts, company

features configuration

Creating group company, use of tally vault, using security control and defining different security levels, use of tally audit, back-up and restore splitting company data, export and import of data.

**Text & Reference Books:**

- 1.networking & data communication-nitin k.naik,both hindi/english
- 2.data communication &computer network-sanjay pahuja,English
- 3e-commerce –m.k. saxena ,English
- e-governance-shashi chawla,hindi
- 4.financial account with tally-mukti jain



**B.com VI Sem  
Programming with VB.NET**

**Max.**

**Marks-40**

**Practical-50**

CCE-10

**Unit –I**

Introduction to .NET, .Net Features, CLR, MSIL, Assemblies and Class Libraries, Introduction to Visual Studio, Project Basics, Type of Projects in .Net, IDE of VB.Net, Menu Bar, Tool Bar, Solution Explorer, Toolbox, Properties Window, Form Designer, Output Window, Object Browser.

The Environment: Editor Tab, Format Tab, General Tab, Docking Tab, Visual Development & event Driven Programming- Methods and Events.

**Unit – II**

The VB.Net Language-Variables, Declaring Variables, Data type of Variables, Variables Declaration, Scope & Life Time of a variables, Constant, Arrays, Types of Arrays, Control Array, Collections, Subroutines, Functions, Passing variable number of Argument , Optional Argument, Returning value from functions.

Control Flow statements: Conditional statement, Loop statement, MSGBOX & Input Box.

**Unit – III**

Working with Forms: Loading, showing and hiding forms, Controlling One from within another.

GUI Programming with Windows Form: Text Box, Label, Button, List Box, Combo Box, Checkbox, Picture box, Radio Button, Panel, Scroll bar, Timer, List view, Tree view, Tool bar, Status Bar their properties, Methods and Events, Open File Dialog, Save FileDialog, FontDialog, Color Dialog, Print Dialog, Link Label.

Designing Menus: Context Menu, Access & Shortcut Keys.

**Unit- IV**

Object Oriented Programming, Classes and Objects, Fields Properties, Methods and Events, Constructor, Inheritance, Access Specified: Public, Private, Protected, Overloading, My Base & My Class Keywords.

Overview of OLE, Accessing the WIN32 API from VB.Net, COM Methodology, advantage of COM+, COM & .Net, Create User Control, Register user Control, Access com components in .net application.

**Unit – V**

Database programming with ADO.Net-Overview of ADO, from ADO to ADO.Net, Accessing Data using Server Explorer, Creating Connections, Command, Data Adapter and Data Set with OLEDB and SQLDB. Display Data on data bound, Display data on data grid.

### **Text & Reference Boojks:**

1. VB.net Programming Black Box by Steven Holzner- Dreamtech Publication
2. Mastering VB.Net by Evangelos Petroustos- BPB Publication.
3. Introduction to .Net Frame Work – Wrox Publication.
4. MSDN.MiroSoft.Com/Net
5. [WWW.Gotdotnet.Com](http://WWW.Gotdotnet.Com)
6. VB.Net Programming , Pragma Publication (Hindi Medium)

### **B.com VI Sem**

### **Programming with VB.NET**

### **LIST OF PRCATICALS**

- 1 WAP to add the two integers.
- 2 WAP to subtract the two integers
- 3 WAP to multiply the integers using function multi.
- 4 Create a function disp to display the message hello on the text box.
- 5 Create the function addition to add the two nos.
- 6 Create the function sub to subtract the two nos
- 7 WAP to change the color of form control at run time.
- 8 WAP to add the item in listbox control at run time.
- 9 WAP to transfer the item from one listbox to combo box at run time.
- 10 WAP to display the image on form control at run time.
- 11 Design the menu for the following:-  
Color:-Red,Green ,Blue  
Exit :-Yes,No.
- 12 WAP to display hello message in textbox control.

13 Design the student database for Sname, rollno, class and result and connect the datagrid control.

14 Write the steps for creating a table employee with eid,ename,department,basic in access and store the records in database using database connectivity.

15 WAP to design the tool bar in vb.net.