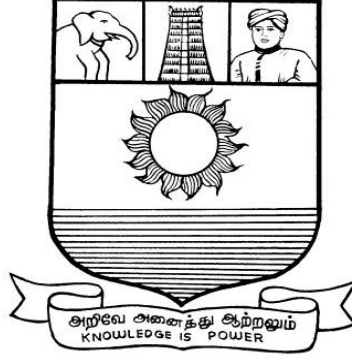


மனோன்மணியம் சுந்தரனார் பல்கலைக்கழகம்

திருநெல்வேலி – 627 012

**Manonmaniam Sundaranar University
Thirunelveli – 627 012.**



கல்விசார் நிலைக்குழுக் கூட்டம்

**MEETING OF THE STANDING COMMITTEE ON
ACADEMIC AFFAIRS HELD ON FRIDAY
THE 27th OCTOBER 2017.**

**Syllabus for Diploma in Computer Application Course offered
through Directorate of Vocational Education
(Community Colleges and Extension Learning Programme)
from 2017 – 2018**

DIPLOMA IN COMPUTER APPLICATION**SCHEME OF EXAMINATIONS**

Subject code	Title of the Paper	Credit	Hours	Passing Minimum
Semester I				
C17CA11/E17CA01	Computer Concepts and Office Automation	6	90	40/100
C17CA12/E17CA02	Database Management System	6	90	40/100
C17CA13/E17CA03	Object Oriented Program With C++	6	90	40/100
C17CE10/E17CE10	Communicative English	6	90	40/100
C17CAP1/E17CAP1	Programming with C++	4	60	40/100
Semester II				
C17CA21/E17CA04	Visual Basic	6	90	40/100
C17CA22/E17CA05	Fundamentals of Creative Multimedia	6	90	40/100
C17LS23/E17LS05	Life Skills	6	90	40/100
C17CAP2/C17CAP2	Multimedia- Lab	4	60	40/100
C17CAPw/C17CAPw	Internship/Project	10	150	40/100

Eligibility for admission: Pass in 12th std examination conducted by the Govt. of Tamil Nadu Board of Secondary Education, Government of Tamil Nadu or any other equivalent examination.

Examination: Passing Minimum for each paper is 40%. Classification will be done on the basis percentage marks of the total marks obtained in all the papers and as given below:

- 40 % but less than 50 % - Third class
50 % but less than 60 % - Second class
60 % and above - First class

Syllabus**FIRST SEMESTER**

- Paper-I : Computer Concepts and Office Automation
Paper-II : Database Management System
Paper-III : Object Oriented Program With C++
Paper-IV : Communicative English
Paper-V : Programming with C++

SECOND SEMESTER

- Paper- VI : Visual Basic
Paper-VII : Fundamentals of Creative Multimedia
Paper-VIII : Life Skills
Paper- IX : Multimedia Lab
Paper- X : Project/Internship

***(Semester Pattern for Community College Only)**

**(C17CA11/E17CA01) PAPER - I COMPUTER CONCEPTS AND OFFICE
AUTOMATION**

UNIT-I COMPUTER FUNDAMENTALS:

Introduction to Computers - Generation of Computers- types of Computers- classification of Computers- components of a Computer – hardware - central processing unit - memory-secondary storage-Input and Output devices-Printer Types - software-operation system.

UNIT-II COMPUTER SECURITY:

Computer Virus –Functioning of viruses – Limitations of viruses - Virus categories – Viruses working - Viruses spread – Role of Antivirus – Protection from virus – Antivirus Tools.

UNIT-III MICROSOFT WINDOW:

Windows basics-concept of windows-desktop-Icons in the desktop-running programs-windows components-Graphical User Interface-Dynamic Data Exchange –Object linking and Embedding-Networking –Concepts of Networking-Networking category-working with programs-programs-Documents-setting-Find-Help-Run-Shutdown-Windows-working with program items-joggle between programs-close a program-properties of window.

UNIT-IV FILE MANAGEMENT AND OTHER UTILITIES:

Working with files and folders-creating a new folder-moving-copying-renaming-deleting-undelete-restoring folders and files-customizing the view-items on my computer – options under floppy disk-options available in Control panel-Recycle bin-restoring files from recycle bin-emptying recycle bin-allocating space to recycle bin-multiple selection – Hiding Folder & Files - printing options –system tools-windows accessories –installing application programs-Installing hardware.

UNIT-V INTRODUCTION TO MS-OFFICE:

MS office products - Components of Office products-starting Work, creating documents, parts of word window, formatting features, toolbars, Menu and commands and their icons.

MS Excel: starting Excel –Navigating-selecting cells –entering and editing text-Row height – cell Alignment- menus commands-toolbars- and their icons-formulas and entering formulas.

Power point: Introduction to presentation and slides – menus, commands-toolbars-and their icons of Power point application –creating a new presentation-creating, deleting, copying a slide-slide numbering –Transition Effects – Animation - saving and closing presentations.

Reference books:

1. Sanjay Saxena, A first course on Computers, Vikas Publications New Delhi, 2000 Edition.
2. Computer Basics with Office Automation Archana Kumar I.K. International Publishing House Pvt. Limited

(C17CA12/E17CA02) PAPER - II DATABASE MANAGEMENT SYSTEM

UNIT-I DATABASE AND RELATIONAL DATA BASE MANAGEMENT SYSTEM:

Data and information – Records and Files – Uses of DBMS – Classification of DBMS – DBMS Modules - DBMS architecture – DBMS languages – Data Definition Language – Storage Definition Language – Storage definition language – View Definition Language – Key concepts – Primary key – secondary key –Foreign Key – super key – Entity Relationship diagrams (ER) – Classification of Data Models –Cursors - Concepts of Relational data models – tuple attributes – Integrity constraints – Basic concepts of RDBMS

UNIT- II MS ACCESS:

Introduction – Getting started – creating a database – modifying – viewing – using wizards to create database – quitting – tables – creating tables – adding and customizing fields – Primary keys and Indexes – Relationships – Adding, Editing data – sorting and grouping of data datasheets and sub datasheets – creating queries – using criteria and expressions to Retrieve data forms – creating and customizing forms – calculating totals – reports – creating reports – printing and previewing reports.

UNIT - III ORACLE:

The basics of Oracles & Database – Tables – DDL, DML & DCL – Data Dictionary – Pseudo columns – creation – Deletion – Modifications – Query – Sub Query - Objects in Oracle – Index only Tables, views, Sequences, Indexes, synonyms, clusters – constraints – Data control Language – role – rocks in Oracle

UNIT – IV :

Record storage and primary file organization – secondary storage devices operations on files – sorted files – Hashing Techniques

UNIT – V ORACLE:

Partitioned Tables and Indexes – Object Oriented concepts in Oracle – Arrays and Nested Tables using large objects – stored program units procedures functions & Packages – Database triggers – Dynamics SQL.

Reference books:

1. Feuerstein, Oracle PL/SQL programming
2. M.C.D. Gayathiri Devi , Relational Database Management Systems
Database Management Systems, Second Edition By R. Panneerselvam

(C17CA13/E17CA03)PAPER – III OBJECT ORIENTED PROGRAMMING WITH C++

UNIT- I PRINCIPLES OF OOPS:

Introduction to Object Oriented Programming – Procedure Oriented Programming – Data Abstraction and Encapsulation – Inheritance – Polymorphism – Binding – Advantages of OOP's

UNIT - II PROGRAMMING IN C++:

Data types – operators – control statements – arrays

UNIT – III CLASSES:

Classes and objects – Constructors- Destructors- Operator Over loading – Type conversions – Derived classes – Virtual functions and Polymorphism based programming.

UNIT -IV STRUCTURES:

Structures – Unions – pointers – bit fields – variables can be declared anywhere – New reserved keywords – The scope resolution operator – Const. Keyword – cout and cin – new and delete operators – In-line functions.

UNIT- V COMMANDS IN C++:

Prototypes for functions – Default arguments for function parameters – User defined functions – call by value – call by reference – default functions – function overloading – friend function – virtual function – library function

Reference books

1. C++ Programming – Sham's Series
2. E. Balagurusamy , Object Oriented Programming with C++.

(C17CE10/E17CE10)Paper IV Communicative English

Unit I: Learning context

Concept of learning – Learning style –Grammatical framework – sentence framing – paragraph and texts

Unit II: Reading

Basic concept – Purposes of reading-Decoding-Reading materials – Barriers of reading

Unit III: Writing

Basic concept-Writing style-Terminology-stages-English spelling and punctuation – Written texts

Unit IV: Speaking

Language functions-Conversation- Features of spoken English – Types of English course: functional English, English literature, advance English – Phonetic

Unit V: Developing Communication Skills

Meaning –Classroom presence- Features of developing learning process- Practical skills and Listening- uses of communicative English

References

Raman,m.& S.Sharma (2011) communication skills, OUP, New Delhi: India
Communication Skills for Technical Students
by Farhatulla (Author)

(C17CAP1/E17CAP1) Paper V PRACTICAL – I PROGRAMMING WITH C++

List of Programs: Will be decided by External Examiner in consultation with internal examiner at the time of examination.

Semester-II

(C17CA21/E17CA04) Paper VI VISUAL BASIC

UNIT – I A FIRST GLANCE TO VB:

Introduction – Features of VB – Integrated development environment – Basic script. The Integrated Development Environment: Introduction, overview, Project Window, Toolbox, Form Layout Window, Properties Window, Menu Bar and Tool Bar, Control Structure: Part 1 Introduction, If/Then, If/Then/Else, While, Do While, Do Until.

UNIT- II CONTROL STRUCTURE:

Part 2 Introduction, For, For/Next, Select Case, Do/Loop While, Do/Loop Until, Exit Do, Exit For, Boolean Data Type, Constant Variables, Logical Operators, Visual Basic Data Types.

SUB PROCEDURES AND FUNCTION PROCEDURES:

Introduction, Form Modules, Sub Procedures, Function Procedures, Call By Value Vs Call By Reference, Exit Sub and Exit Function, Storage Classes, Scope Rules, Recursion, Optional Arguments, Named Arguments, Visual Basic Math Functions, Code Modules.

UNIT-III ARRAYS:

Introduction, Arrays, Declaring Arrays, Passing Arrays to Procedures, Sorting Arrays, Searching Arrays, Multidimensional Arrays, Control Arrays, Dynamic Arrays, Para array, Function array.

UNIT-IV BASIC GRAPHICAL USER INTERFACE CONCEPTS:

Controls, Textbox, Mask Edit, Combo Box, List Box, Scrollbars, Slider, Menus, Pop-up Menus, Function MsgBox, Advanced Graphical User Interface Concepts: MDI, Multiple Forms, Template Forms, Rich Textbox, Up down, Image List, Image Combo,

UNIT -V MOUSE AND KEY BOARD:

Changing the shape of the Mouse Pointer, Mouse Events, Mouse Buttons, Shift-Ctrl-Alt Keys, Drag and Drop, Key Events, Key Preview Property, Database Management: ADO Data Control, DAO Data Control, RDO Data Control, Accessing the Data Base using ADO, DAO

Reference books:

1. H.M.Deital, P.J.Deltal and T.R.Neito Pearson , Visual Basic 6 How to Program, Education Asia
2. Paul D. Sheriff , Visual Basic 6, Prentice Hall of India 2000.
3. Visual Basic 6: The Complete Reference (With Cd) By Jerke

(C17CA22/E17CA05) Paper VII FUNDAMENTALS OF CREATIVE MULTIMEDIA

UNIT-I:

Introduction to computers, characteristics and limitations of computer, Block diagram of computer, types of computers, uses of computers, computer generations. Number systems: binary, hexa and octal numbering system

UNIT-II:

Input and output devices: Keyboard and mouse, inputting data in other ways, Types of Software: system software, Application software, commercial, open source, domain and free ware software, Memories: primary, secondary and cache memory. Windows basics: desktop, start menu, icons.

Unit –III

Introduction to Adobe photoshop, Getting started with photoshop, creating and saving a document in photoshop, page layout and back ground, photoshop program window-title bar, menu bar, option bar, image window, image title bar, status bar, ruler, palettes, tool box, screen modes, saving files, reverting files, closing files.

Unit –IV

Images: working with images, image size and resolution ,image editing, colour modes and adjustments , Zooming & Panning an Image,, , Rulers, Guides & Grids- Cropping & Straightening an Image, image backgrounds ,making selections.

Working with tool box: working with pen tool, save and load selection-working with erasers-working with text and brushes-Colour manipulations: colour modes- Levels – Curves - Seeing Colour accurately - Patch tool – Cropping-Reading your palettes - Dust and scratches-Advanced Retouching- smoothing skin.

Reference Books:

1. Fundamentals of Computers by Reema Thareja from Oxford University Press
Adobe Photoshop Class Room in a Book by Adobe Creative Team
2. Fundamentals of Multimedia By Ze-Nian Li, Mark S. Drew, Jiangchuan Liu

(C17LS23/E17LS05) Paper VIII LIFE SKILL **(Common to All Courses)**

UNIT- I ATTITUDE :

Positive thinking – Goal setting – Problem Solving and Decision making – Leadership and Team Work.

UNIT- II COMMUNICATION SKILLS:

Oral communication: Concept of English language – Fluency – Verbal communication in official and public situations.

UNIT-III COMMUNICATION SKILLS:

Written Communication: Comprehension – Writing a formal letter like application for Job, enquiry, reply, complaint and such others – preparation of Resume, Curriculum Vitae.

UNIT- IV COMPUTING SKILLS – 1:

Introduction to Computers, its various components and their respective functions –
Memory storage devices – Microsoft (MS) Office – MS Word.

UNIT - V COMPUTING SKILLS – 2

Internet Basics – Origin of Internet – MODEM – ISP– Upload – Download – e-mail –
Origin of worldwide web (www) Browsers – Search engines.

Reference books:

1. Life skill, Manonmaniam Sundaranar University Publications Division (2011)

2. Developing Entrepreneurial Life Skills: Creating and Strengthening ...

By Shipra Vaidya

(C17CAP2/E17CAP2) Paper IX MULTIMEDIA LAB

1. Write a program to justify a text entered by the user on both left and right hand side. for example the text “ An architect may have a graphics program to draw an entire building but be interested in only ground floor”, can be justified in 30 columns. An architect may have a graphics programs draw an entire building but interested in ground floor.
2. Study the notes of a piano and stimulate them using the keyboard and store them in file.
3. Write a program to read a paragraph and store it to a file name suggested by the author.
4. Devise a routine to produce the animation effect of a square transforming to a triangle and then to a circle.
5. Write a program to show a bitmap image on your computer screen.
6. Create a web page for a clothing company which contains all the details of that company and atleast five links to other web pages.
7. Write a program by which we can split mpeg video into smaller pieces for the purpose of sending it over the web or by small capacity floppy diskettes and then joining them at the destination.
8. Write a program to simulate the game of pool table.

(C17CAPW/E17CAPW) X Internship/Project