**E.G.S PILLAY ENGINEERING COLLEGE, NAGAPATTINAM**

**DEPARTMENT OF COMPUTER APPLICATIONS**

**Model Exam**

**Subject Code/Name: MC9243/Visual Programming Marks: 100**

**Sem/Year: II/IV Time: 3 Hrs**

**Staff Name: Mr.** S.Selvaganapathy  **Date:**

 **PART-A 10\*2=20**

**Answer All the Questions**

1. Differentiate Win16 and Win32 API.

The Win16 API is more efficient in Ordinal Linkage and Win32 API is more efficient in Symbolic Linkage. The Win16 API second Parameter WPARAM is defined as WORD and the third Parameter LPARAM is defined as LONG. In Win32 WPARAM is defined as UNINT and the third Parameter LPARAM is defined as LONG

1. What is the use of TextOut function? How it differs from DrawText function?

The TextOut function is used to display the text in the client area whereas the DrawText function is used to display the text in window area.

1. Should I use Visual C++ or Visual Basic? Which one is better?

For Developing sophisticated windows application VC++ is better. For developing Application oriented software VB is better.

1. Define Control Array. What is the maximum size of array that VB6.0 can handle?

Controls are the elements of the user interface with which the user can interact and control the application. The maximum size of array that VB6.0 can handle is 32767.

1. What you mean by View?

View is an interface between document and user.

1. Why is CPaintDC used for WM\_PAINT message instead of normal CDC Object?

CPaintDC is a Paint Device context. It is used to handle Paint message. CDC is refers to the general device context.

1. What are valid and invalid rectangles?

Window Procedure when it receives WM\_PAINT message it often only need to repaint particular rectangle area which is to be repainted (for ex. Dialog box in client area). The area to be repainted is called invalid rectangle. A program can also validate any rectangular are within the client area by calling the ValidateRect function.

1. How CTreeCtrl differs from CTreeView?

A tree control is an object that displays a hierarchical list of items arranged as a physical tree but a little upside down. Tree view controls are often used to display disk directories or the contents of books or other documents.

1. What is ISAPI? List MFC ISAPI Server Extension.

The ISAPI is a Internet Service Application Program Interface. It is used for internet services and its applications.

1. What are the advantages of WinInet Control over WinSock Control?

WinInet control is a higher level API than WinSock. It supports HTTP, FTP ,Gopher language, Synchronous and Asynchronous modes. WinInet control uses the Build server but WinSock uses Internet Server and Internet Client. WinInet has the following benefits: Caching, Buffer I/O, User friendly, Web Proxy and Security.

 **PART-B 5\*16=80**

1. (a) Explain in detail how user interactions are handled by the Windows OS?

Definition of the Windows Program (2 Marks)

Diagram of a simple windows programming model (4 Marks)

WinMain() Function Importance (3 Marks)

Window procedure Definition (2 Marks)

Role of Message Identifier (3 Marks)

Window handle definition and message handler usage(2 Marks)

**OR**

(b) Write a windows program to register, create and display a window.

Initializing the window class members (2 Marks)

Registering the Window class (2 Marks)

CreateWindow() function Prototype (4 Marks)

ShowWindow() function Prototype ( 4 Marks)

Role of UpdateWindow() function (4 Marks)

1. (a) Write a VB Program to convert numbers from one base to another.

 Aim of the program (2 Marks)

 Step by Step Procedure using control structures (4 Marks)

 Program using control structures (8 Marks)

 Sample Output (2 Marks)

**OR**

(b) Write a Calculator Program which let me type in (1+1) \* (2-3) and compute the results using Control arrays.

 Definition for control Array (2 Marks)

 Step by Step Procedure for control array (4 Marks)

 Program using select case statements and control array controls (8 Marks)

 Sample Output (2 Marks)

1. (a) Develop a Windows GDI Pen Object application to draw Rectangle,Ellipse and line objects. Using Brush object fill the above objects.

Definition for GDI Objects (2 Marks)

Step by Step Procedure for creating drawing (4 Marks)

Program using GDI Objects with initialization, selection and

GDI function statements (8 Marks)

Sample Output (2 Marks)

 **OR**

(b) Develop a MFC Application to load a Background image (BMP) and erase the image with other image.

Definition for BITMAP Objects (2 Marks)

Step by Step Procedure for creating BMP image(4 Marks)

Program using BMP Objects (8 Marks)

Sample Output (2 Marks)

1. (a) Develop a Dialog based MFC application which collects subject marks from user for finding grades and total marks of a student.

Use of Dialog based application (2 Marks)

Step by Step Procedure for creating dialog based application (4 Marks)

Program using Member variables (8 Marks)

Sample Output (2 Marks)

 **OR**

(b) Write an application that uses the common Dialog boxes for Font, Color and File. Also have an option for changing the background color of the form with the color toolbar buttons provided and create a status bar to display the status of CAPSLOCK and NUMLOCK.

Use of Common Dialog object (2 Marks)

Step by Step Procedure for common dialog application (4 Marks)

Program using color palette toolbar (6 Marks)

Program snippet for displaying status bar (2 Marks)

Sample Output (2 Marks)

1. (a) What is DLL? Explain its types and advantages. Write a Program to create user defined DLL.

DLL definition (2 Marks)

Fundamental DLL theory (2 Marks)

Symbolic and Ordinal Linkage (4 Marks)

Advantages – Reuse of components (2 Marks)

Step by step procedure for dll creation (2 Marks)

Program with DllMain() (4 Marks)

 **OR**

 (b) Develop an BANK database application using MFC Wizard to browse, add, delete and refresh the records of Account\_Details table.

MFC Database objects definition (2 Marks)

Steps involved in creating database application using MFC Wizard (2 Marks)

Declaration and binding of member variables with recordset using classwizard (4 Marks)

Add, Delete and Edit codes (4 Marks)

MoveFirst, MoveNext, MoveLast, MovePrevious codes (4 Marks)