

**SHRI ANGALAMMAN COLLEGE OF ENGINEERING AND TECHNOLOGY  
DEPARTMENT OF COMPUTER SCIENCE**

**VISUAL PROGRAMMING**

**YEAR : III**

**SEMESTER : V**

**UNIT – I**

**WINDOWS PROGRAMMING  
PART – A (2 MARKS)**

- 1. List out the aspects of Windows**
- 2. Define Dynamic Link Libraries**
- 3. List out the types of DLL which is implemented in Windows.**
- 4. Define Window Procedure**
- 5. Define Message Queue & Message Loop**
- 6. Define handle**
- 7. Define Hungarian Notation**
- 8. What are the events used to generate a WM\_PAINT message?**
- 9. Define Invalid region**
- 10. Define Invalid rectangle**
- 11. Define Device Context**
- 12. List out the aspects of GDI**
- 13. Define System font**
- 14. Define Dithering**
- 15. List out the GDI Primitives**
- 16. List out the pen styles**
- 17. Define Mapping Modes**
- 18. Define Viewport and window**
- 19. Define Raster Operation**
- 20. Define child window control**

**PART – B**

- 1. Explain in detail about various versions of Windows Operating System (16)**
- 2. Explain briefly about**
  - a. How to create a window (6)**
  - b. Displaying the window (4)**
  - c. Processing the message (6)**
- 3. a. Describe the functions of Message Loop (8)**
  - b. Explain in detail about the Windows Message Structure and Windows Procedure.(8)**
- 4. a. How does the WM\_PAINT message is processed? (10)**
  - b. What is WM\_DESTROY message? How the program is terminated? (6)**
- 5. a. Define DC. (2)**
  - b. What are the methods available to get the DC and various types of DC Handle? (14)**
- 6. Explain Windows Graphics Device Interface in detail (16)**
- 7. a. Write a note on Hungarian Notation in Windows Programming (6)**
  - b. Write a program to display a message in the center of a window (10)**
- 8. a. Explain the methods of getting device context handle (8)**
  - b. Briefly discuss the various child window button controls (8)**

## UNIT – II

### **VISUAL C++ PROGRAMMING - INTRODUCTION PART – A (2 MARKS)**

- 1. Define Application Framework**
- 2. Define Appwizard**
- 3. Define Classwizard**
- 4. What are the diagnostic tools available in VC++?**
- 5. What are the types of mapping modes?**
- 6. Distinguish between modal and modeless dialog controls**
- 7. Define bitmap**
- 8. Mention some of the window common control.**
- 9. What are dialog controls?**
- 10. Mention some of the GDI derived classes.**

### PART – B

- 1. Draw & Explain in detail about various components of VC++ (16)**
- 2. Explain in briefly about**
  - a. MM\_TEXT Mapping Mode (5)**
  - b. Fixed Scale Mapping Mode (4)**
  - c. Variable Scale Mapping Mode (7)**
- 3. a. Explain in detail about various types of video cards. (10)**
  - b. How to compute Character height (6)**
- 4. What is meant by Modal & Modeless dialog control? Explain Modal dialog controls with a sample programs. (16)**
- 5. a. Discuss about Window Common Controls (12)**
  - b. What are different Mapping Modes available in VC++? (4)**
- 6. a. Explain how to create an instance of color dialog & the functions associated with it. (8)**
  - b. Write a VC++ program to paint the background with a brush. Set the color using the coordinates at which the mouse is clicked. (8)**
- 7.a. Differentiate the modal & modeless dialog (4)**
  - b. Write a VC++ program to create & display a modeless dialog (6)**
  - c. Write a VC++ program to draw a rectangle as the mouse moves (6)**

## UNIT – III

### THE DOCUMENT VIEW ARCHITECTURE

#### PART – A (2 MARKS)

1. Define Keyboard Accelerator
2. List out Rich Edit Control Functions
3. Define toolbar
4. List out toolbar states.
5. Define Status bar
6. Define Status Indicator
7. What are the two text editing tools?
8. What are the steps to be followed to build floating popup menus?
9. What are the characteristic of SDI frame window?
10. Define Serialization
11. Explain splitter window?
12. Distinguish between dynamic and static splitter windows
13. Define Document – View Architecture
14. Distinguish Implicit and Explicit Linkage
15. What is LoadLibrary function?

#### PART – B

1. Write down the steps to create a VC++ program that encapsulates the menu, keyboard accelerator and tool bar to draw a circle and rectangle and show the output. (16)
2. What are the functions performed in SDI application and Explain that functions in detail
3. Write down the steps to create a VC++ program to create an Extension DLL and use it and test it in the client program. (16)
4. Develop a dialog based application to simulate a calculator. The calculator should add, multiply, subtract and divide 2 integers. (16)
5. Develop a DLL to add & multiply two numbers and write an application to use the DLL
6. Explain how to create a toolbox for the application. (16)
7. Explain SDI & MDI application in detail. (16)
8. a. What is Rich Edit control & discuss the supporting MFC classes for the control. (8)  
b. Discuss the Menu item properties (8)

## UNIT – IV

### **ACTIVEX AND OBJECT LINKING AND EMBEDDING PART – A (2 MARKS)**

1. Define ActiveX control
2. List out Calendar control's properties, methods and events.
3. Define Container
4. Define Event sink map
5. Define COM
6. Define Mini Server
7. Define Full Server
8. List out the Component States
9. What is the use of IUnknown interface?
10. What is class factory?
11. Define OLE
12. Define DCOM
13. What are main features of COM?

### PART – B

**How the COM Client interacts with Inprocess Component. (16)**

2. a. What are the steps involved to create an ActiveX control at runtime (6)  
b. What are the steps involved in OLE Drag & Drop (10)
3. Explain the features of OLE container – component interactions (16)
4. Explain in detail ActiveX control container programming with example (16)
5. Write short notes on
  - a. IUnknown Interface and QueryInterface Member function (10)
  - b. Reference Counting (6)
6. Write short notes on
  - a. Class Factory (8)
  - b. Containment & Aggregation Vs Inheritance (8)
7. a. Write a COM class using multiple inheritance approach (8)  
b. Discuss the container interfaces (8)
8. a. Highlight the features of the control (8)  
b. Explain the steps involved in the installation of ActiveX control (8)

## UNIT – V

### **ADVANCED CONCEPTS PART – A (2 MARKS)**

- 1. List out the advantages of DBMS**
- 2. Define SQL**
- 3. List out the functions in CRecordset class**
- 4. List out the ODBC elements**
- 5. List out the MFC classes for DAO**
- 6. Define Dynaset**
- 7. Define snapshot**
- 8. Define Threads**
- 9. Define event**
- 10. Define IP, UDP and TCP**
- 11. Define WinSock**
- 12. Define WinInet**
- 13. Define IIS**
- 14. Define ISAPI Server**
- 15. List the advantages of WinInet over WinSock.**

### PART – B

- 1. How the Worker and Main Thread communicate with each other (16)**
- 2. Explain how ODBC database connectivity is done in VC++ with sample application (16)**
- 3. Write down the WinSock Server and Client Program (16)**
- 4. a. Explain in detail about ISAPI server extension DLL (8)**  
**b. Explain in detail about MFC ISAPI server extension classes (8)**
- 5. Write a program to play a audio and Video file (16)**
- 6. Write a VC++ program to query the database (16)**
- 7. Write a MFC automation client program (16)**
- 8. Write a program to implement a WinInet Client using openURL (16)**