

CS410 Visual Programming
Mid Term Examination – Special Semster 2005
Time Allowed: 90 Minutes

Please read the following instructions carefully before attempting any of the questions:

1. Attempt all questions. Marks are written adjacent to each question.
2. Do not ask any questions about the contents of this examination from anyone.
 - a. If you think that there is something wrong with any of the questions, attempt it to the best of your understanding.
 - b. If you believe that some essential piece of information is missing, make an appropriate assumption and use it to solve the problem.
 - c. Write all steps, missing steps may lead to deduction of marks.
 - d. All coding questions should be answered using **VC++**.
You are allowed to write and test your code. If you do so please remember to copy and paste your code into the examination solution area. **(Do NOT share your code; your colleague could get higher marks than you!!)**

****WARNING: Please note that Virtual University takes serious note of unfair means. Anyone found involved in cheating will get an `F` grade in this course.**

Total Marks: 55

Total Questions: 13

Question No. 1

Marks : 8

Write a windows procedure function for the above program that explicitly handles the window closing functionality by pressing any key. This functionality can be achieved by notifying the WM_CHAR message. You can use DestroyWindow function for closing the window. You are also required to provide appropriate functionality against WM_DESTROY and the default message.

Question No. 2

Marks : 2

Consider the following code snippet

```
char x = 'Z';  
float y = 8;
```

```
char *xPtr = &x;  
float *yPtr = &y;
```

```
xPtr++;    //1
```

```
yPtr++;    // 2
```

What will be the address of xptr and yptr respectively after the execution of statement 1 and statement 2 (assuming xPtr has the address of 105 and yptr has the address of 102 initially)

- ☐ 106, 106
- ☐ 107, 107
- ☐ 106, 107
- ☐ 107, 106
- ☐ None of the above

Question No. 3

Marks : 02

What is a function pointer?

- ☐ A pointer that passes as an argument to the function
- ☐ A pointer that is declared inside the function
- ☐ Some returning pointer
- ☐ A pointer that points to the starting address of the function
- ☐ A pointer that takes return value of some other function

Question No. 4

Marks : 02

How many parameters do WinMain function contains

- ☐ 5
- ☐ 2
- ☐ 1
- ☐ 3
- ☐ 4

Question No. 5

Marks : 03

What is the Difference between __stdcall and __cdecl calling convention?

Question No. 6

Marks : 02

Which of the following class of window is pre-registered?

- ☐ main window
- ☐ pop-up window
- ☐ system window
- ☐ child window
- ☐ parent window

Question No. 7

Marks : 02

Which of the following is not a user defined data type?

- ☐ Structures
- ☐ Unions
- ☐ Enumerations
- ☐ Typedefs
- ☐ None of the above

Question No. 8

Marks : 05

What are handles? Name three basic types of handles in windows programming.

Question No. 9

Marks : 20

Make a program that registers a window class names "Test Window Class" having following features

- ☐ Redraws window if size changes
- ☐ Dark gray background color ---- using DKGRAY_BRUSH
- ☐ Having default application icons

- o With vertical two headed arrow--- using IDC_SIZENS

Fill the appropriate window's structure variables with the required values given above. Handle of the current instance of the window class should be assigned to the appropriate structure variable. Set the remaining variables null or zero.

Your program should display a message box that displays a message "Test Window class can not be registered" incase of failure of registering the window class. It should also contain OK button and a title of "Error".

Create a main window named "First Test Window" of the "Test Window" class, having following features

- Overlapped window with Horizontal and vertical scroll bars
- Having default horizontal and vertical positions
- Width should be 340 and height should be 180
- Disabled close button

Your program should display a message box that shows a message "First Test Window, can not be created" incase of failure. The message box should also contain an OK button and a title of "Error".

Implement a message loop for the above created application. The message loop should retrieve all the messages related to your application from message queue and then dispatch one by one to the respective windows. The messages should be dispatched after translating into character form.

Question No. 10

Marks : 02

Which of the following is not a feature of windows programming?

- ☐ Resource sharing
- ☐ Device independent programming
- ☐ Multitasking
- ☐ Single path of execution
- ☐ GDI (Graphics Device interface)

Question No. 11

Marks : 02

How many bytes will be allocated to abc;

```
Union person{
    Char name[30];
    Int age;
    Float height;
};
void main(){
    person abc;
}
```

- ☐ 42
- ☐ 38
- ☐ 30
- ☐ 36
- ☐ 28

Question No. 12

Marks : 02

----- is a subsystem responsible for displaying text and images on display devices and printers.

- ☐ Pens
- ☐ Brushes
- ☐ GDI (Graphics Device Interface)
- ☐ Kernel
- ☐ Operating system

Question No. 13

Marks : 03

Explain system defined messages? Why an application needs these messages?
