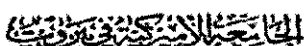




American University
of Beirut



Department of Computer Science

Fall 04-05

CMPS 209 – Final exam

90 minutes



Instructions:

1. Make sure that you have one answer sheet and a question booklet of 10 pages.
2. Everything you write on the answer sheet should be in **HB-2 pencil**.
3. Write your name and ID number on **both** the question and answer sheet.

ID NUMBER				
FULL NAME				
SECTION				
ROOM	<input type="checkbox"/> Nicely 500	<input type="checkbox"/> Wing D	<input type="checkbox"/> Bliss 203	<input type="checkbox"/> WHCR
SEAT NUMBER				
INSTRUCTOR	<input type="checkbox"/> Mrs. Hayat Bohsali			
	<input type="checkbox"/> Mr. Wassim Mukaddam			
	<input type="checkbox"/> Ms. Afaf Tabsh			
SIGNATURE				

Programming (20 %)

You are hired by ABC Postal Services to develop an application that computes the delivery charges. Three factors are considered when calculating the delivery charges of packages: weight of the package, package type, and type of delivery.

The interface for the application is as follows:

Fill in the visual basic code for the event procedure of `cmdCalculate` to help compute the delivery charges of a package. The company allows two types of packages (letter or box), and two types of delivery service (Fast or Regular).

- ABC Postal Services computes the delivery charges according to the following table:

	Weight < 50 grams	Weight ≥ 50 grams
Letter	2250 L.L.	20 L.L. per gram
Box	4000 L.L.	90 L.L. per gram

- When the fast delivery option is selected, 50 % of the amount of the bill is added to the bill.

Notes:

- The calculated amount should be displayed on a message box.
- Assume that the weight entered by the user is always a number.
- Use constants and variables in your code.

Sample output for a shipment packaged as a letter whose weight is 250 gram sent using fast delivery service is:

Your handwriting should be readable so that it can be graded.

Option Explicit

```
Private Sub cmdCalculate_Click()
```

End Sub

Flowcharts (10 %)

Develop a flowchart for a program that asks the user to enter two numbers. In case the first number is double the second number, the program will display the sum and the product of the two numbers entered by the user. Otherwise, the program will keep on subtracting three from the larger number until it becomes less than or equal to the smaller. When done, the program will display how many times it repeated the subtraction step.

SAMPLE Multiple Choice (70%)

1. Which binary coding scheme is typically used for microcomputers?
 - a) Unicode
 - b) ASCII
 - c) EBCDIC
 - d) None of the above
2. Which of the following is another name for a chip?
 - a) Silicon chip
 - b) Integrated circuit
 - c) Semiconductor
 - d) All of the above
3. Computers require _____ to power their electronic components and to represent data and instructions.
 - a) direct concurrency (DC).
 - b) direct current (DC).
 - c) direct adapters (DC).
 - d) direct units (DU).
4. A variety of specialized processing chips has been developed called
 - a) central processing unit (CPU).
 - b) microprocessor chips.
 - c) coprocessor chips.
 - d) control units.
5. How many bits are there in a byte?
 - a) 20
 - b) 4
 - c) 16
 - d) 8
6. The most common type of monitor used in offices and homes is this kind of monitor.
 - a) Liquid crystal display
 - b) Data projectors
 - c) Cathode-ray tube
 - d) None of the above
7. The most common types of output are
 - a) text, resolutions, and graphics.
 - b) graphics, resolution, and pixels.
 - c) text, graphics, audio, and video.
 - d) text, graphics, and input.
8. Which of the following is not an example of an input device?
 - a) Mouse
 - b) Scanner
 - c) Printer
 - d) Keyboard

9. The most common way to input data into a computer is with a
 - a) light pen.
 - b) keyboard.
 - c) scanner.
 - d) touch screen.
10. Which of the following devices performs a function similar to that of a mouse?
 - a) Touch surface
 - b) Touch screen
 - c) Wand reader
 - d) Light pen
11. Voice recognition systems use:
 - a) head tracking, a sound card, and special software.
 - b) a joystick, a sound card, and special software.
 - c) a microphone, a sound card, and special software.
 - d) a microphone, an alternative mouse, and special software.
12. One of the following is not an example of a floppy diskette.
 - a) Zip disk
 - b) SuperDisk
 - c) Hard disk
 - d) HiFD disk
13. Floppy disks utilize this to protect the disk from accidentally erasing data.
 - a) Write-protect notch
 - b) Lock-up notch
 - c) Storage-protect notch
 - d) Read Only notch
14. The internal hard disk of a system unit is also called a
 - a) hard-disk cartridge.
 - b) PC card hard disk.
 - c) fixed disk.
 - d) hard-disk pack.
15. For most microcomputer systems, the internal hard drive disk is designated as the
 - a) D Drive.
 - b) A Drive.
 - c) J Drive.
 - d) C Drive.
16. A typical microcomputer's internal hard disk has a
 - a) motor, system board, and read/write heads.
 - b) motor, read/write heads, and four metallic platters sealed inside a container.
 - c) read/write heads, system board, and a jewel box.
 - d) none of the above

17. Which of the following secondary storage devices does not have moving parts?
- a) Hard disks
 - b) Solid-state storage devices
 - c) Read/write heads
 - d) All of the above
18. Three types of compact disks include CD-ROM, CD-R, and
- a) CD-W.
 - b) CD-RAM.
 - c) CD-DVD.
 - d) CD-RW.
19. Select one of the following that is a basic element of every communication system.
- a) Sending and receiving devices
 - b) Communication channel
 - c) Data transmission specification
 - d) All of the above
20. The concept of linking people and resources via computer networks is known as
- a) computer linkage.
 - b) embedded system communication (ESC).
 - c) connectivity.
 - d) objectivity.
21. A modulator-demodulator is more commonly known as the
- a) communication module.
 - b) satellite receiver.
 - c) modem.
 - d) serial data port.
22. The term used as a measurement of a communication channel's data capacity is
- a) broadband.
 - b) bandwidth.
 - c) protocol.
 - d) data flow.
23. The standard protocol (communication rules for exchange of data) of the Internet is
- a) TCP/IP.
 - b) Novell Netware.
 - c) Banyan Vines.
 - d) Peer-To-Peer Lines.
24. The central host computer or file server in a star network maintains control with its connecting devices through
- a) sharing.
 - b) networking.
 - c) enterprise computing.
 - d) polling.

25. The network strategy extensively used throughout the Internet is a
- terminal network system.
 - peer-to-peer network system.
 - client/server network system.
 - none of the above.
26. Which of the following is the best data Type to use for a variable that will always contain whole numbers in the range 0 to 20,000?
- Currency
 - Integer
 - Long
 - Single
 - Variant
27. Which of the following constants tells Visual Basic to advance to the next line?
- Advance
 - VbGoToNewLine
 - VbAdvance
 - VbReturn
 - None of the above
28. You can use a(n) _____ control to execute code at regular intervals.
- Clock
 - Interval
 - Time
 - Timer
 - None of the above
29. Assume the form contains two frame controls: one frame control contains two option buttons; the other frame control contains three check boxes. What is the total number of option buttons and check boxes that can be selected at any one time?
- One
 - Two
 - Three
 - Four
 - Five
30. What is the result of the expression $23 - 32 / 4^2 + 6$
- 47
 - 27
 - 2
 - 11.0625
 - none of the above
31. Which of the following is a valid condition for an If..Then.. Else statement
- Val(txtAge.txt > 65)
 - Val(lblprice.caption) > 0 and < 10
 - Cursales > 100 and curCost <= 1000
 - UCase(strState) = "Alaska" Not and UCase(strState) = "Hawaii"
 - None of the above

32. Assume you want to compare the string contained in the Text property of the txtName control. With the name Bob. Which of the following conditions should you use in the If...Then...Else statement?(Be sure the condition will handle Bob, BOB,bob, and so on.)
- a) TxtName.text="BOB"
 - b) Txtname.text=Ucase("BOB")
 - c) Txtname.text=Ucase("Bob")
 - d) Ucase(txtName.Text)="Bob"
 - e) Ucase(txtName.Text)="BOB"
33. Which of the following will prompt the user for a number, then correctly assign the user's response to the sngNum Variable?
- a) InputBox("Enter the street number:","Number") = sngNum
 - b) sngNum= InputBox("Enter the street number:","Number")
 - c) Number= val(InputBox("Enter the street number:","sngNum"))
 - d) sngNum= val(InputBox("Enter the street number:","Number"))
 - e) None of the above
34. Assume the intNumber variable contains the number 200. What value will be in the intNumber variable after the following selection structure is processed?

```
If intNumber <=100 Then
    intNumber= intNumber*2
ElseIf intNumber >500 Then
    intNumber= intNumber*3
EndIf
```

- a) 0
 - b) 200
 - c) 400
 - d) 600
35. What is the output of the following nested if statement when X=209 ?

```
If X>10 then
    MsgBox "X is in the order of 10's"
Elseif X>100
    MsgBox "X is in the order of 100's"
Elseif X>1000
    MsgBox "X is in the order of 1000's"
Else
    MsgBox "X is between 0 and 10 "
End If
```

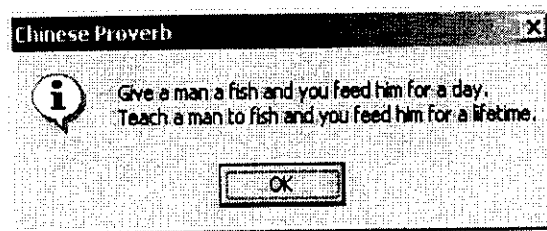
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36. Write a VB statement to display the message box shown below:



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37. What goes wrong when a user clicks on the cmdButton control? Explain your answer

```
Private Sub cmdButton_Click()  
Dim intOne As Integer, intTwo As Integer, intThree As  
Integer  
intOne = 25000  
intTwo = intOne  
intThree = intOne + intTwo  
MsgBox intThree  
End Sub
```

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***** END OF EXAM *****