*1. What is the general format of the statement used to code decisions in an application?*

* If -> Then {code} Elseif/Else {code} End if, is the general format of a statement to code decisions. **If** one thing is true do this. **ElseIf**, if the If statement is false try this one. **Else** if none of the above is true do this, **End If** tells the compiler none of the code after End if is part of the If statement. ElseIf, and Else are optional.

*3. Explain the purpose of comparison operators and logical operators.*

* Comparison operators [ >, <, =, ‘<>’, <=, >=] allow you to compare two variables or constants, and returns either a true or a false.
* Logical operators [AND, OR, ANDALSO, ORELSE, NOT, XOR] allow you to specify whether you want a specific combination of statements to be either true or false. AND requires both, Or requires either, Andalso checks the first and if it’s true the following, OrElse checks if the first is true and then skips the following Not returns the opposite Boolean value of the statement, XOR returns true only if one of the statements, but not two are true.

*4. Differentiate between a comparison performed on numeric data and a comparison performed on string data.*

* Comparisons on numeric data follow algebra.. so negative numbers are less than positive, etc.
* String data follows the ASCII, ANSI, or Unicode tables, which all have the same first 128 characters, and checks each letter against the corresponding letter place in the strings until the letters are different and then compares that character.

*5. How does Visual Basic compare the Text property of a text box?*

* ?[same question]? String data follows the ASCII, ANSI, or Unicode tables, which all have the same first 128 characters, and checks each letter against the corresponding letter place in the strings until the letters are different and then compares that character.

*8. Explain a Boolean variable test for True and False. Give an example.*

* A Boolean can check a Dim-ed Variable of Boolean type, or data that returns a Boolean value.
* **If radiobutton.checked Then** returns a true value if checked or a false value if not checked. It is also equivalent to **If radiobutton.checked = [Boolean true/false] Then.**

*9. Give an example of a situation where nested Ifs would be appropriate.*

* If you want to evaluate a second condition only if the 1st one is true then a nested if statement will be useful, and then perform a function within that second If loop if it’s true/false then it is appropriate.

*10. Define the term validation. When is it appropriate to do validation?*

* Validation is pre-checking user input to make sure it is valid, before calculations.
* Validation is appropriate whenever a user is entering input that could not match a data type exactly.

*12. When would it be appropriate to use a Case structure? Give an example.*

*14. What steps are necessary to view the current contents of a variable during  
program execution?*