

# COLLEGE OF ENGINEERING \& TECHNOLOGY 

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Course : Introduction To Programming
Course No. : CC114

## Sheet 3 <br> Variables \& Arithmetic Opertaions

Q1. Choose the correct answer:

1. The $\qquad$ operator performs integer division.
a) $\backslash$
b) +
c) Mod
d) $\wedge$
2. Every variable has a
a) name
b) type
c) value
d) all of the above
3. In Visual Basic, arithmetic expressions must be written in form.
a) straight-line
b) top-bottom
c) left-right
d) right-left
4. Arithmetic expressions are evaluated $\qquad$
a) from right to left
b) from left to right
c) according to the rules of operator precedence
d) Both b and c
5. Variable declarations in event handlers begin with the keyword $\qquad$
a) Declare
b) Sub
c) Dim
d) Integer
6. Entering a value in a TextBox raises the event $\qquad$
a) TextAltered
b) ValueEntered
c) ValueChanged
d) TextChanged
7. The $\qquad$ function converts user input from a TextBox to a value of type Double.
a) Convert
b) MakeDouble
c) Val
d) WriteDouble
8. The data type in a variable declaration is immediately preceded by keyword
a) IsA
b) Type
c) Dim
d) As
9. The expression intX $\qquad$ int Y yields the remainder afetr int X is divided by int Y .
a) 1
b) /
c) Mod
d) None of the above
10. Given $Q=c+\frac{2 a^{3}-9 a b}{27}$, which of the following is the correct statement for this equation?
a) $\mathrm{Q}=\mathrm{C}+2 * \mathrm{a}^{\wedge} 3 / 27-9 * \mathrm{a} * \mathrm{~b}$
b) $\mathrm{Q}=\left(\mathrm{C}+2 * \mathrm{a}^{\wedge} 3\right) / 27-9 * \mathrm{a}^{*} \mathrm{~b}$
c) $\mathrm{Q}=\mathrm{C}+\left(2 * \mathrm{a}^{\wedge} 3-9 * \mathrm{a} * \mathrm{~b}\right) \backslash 27$
d) $\mathrm{Q}=\mathrm{C}+\left(2 * \mathrm{a}^{\wedge} 3-9 * \mathrm{a} * \mathrm{~b}\right) / 27$

Q2. For the following Visual Basic statement, determine the output value

$$
\begin{aligned}
& \text { Dim } A, B, C, D, E, F, G \text { As Double } \\
& A=6 \\
& B=5.5 \\
& D=11 \\
& C=60 \\
& D=23 \\
& E=10 \\
& F=4 \\
& G=A+B / C * D^{\wedge} 2-F / E
\end{aligned}
$$

Q3. What value would be stored in an integer variable "i" as a result of the following calculation?

$$
\begin{aligned}
& \text { Const j As Integer }=100 \\
& \text { Dim i As Integer } \\
& i=7+3 \text { * j Mod }(\mathrm{J}-50)
\end{aligned}
$$

Q4. What will be the value of intAnswer after execution of there statements?

```
Const intNumA As Integer \(=6\)
Const intNumB As Integer \(=4\)
Const intNumC As Integer \(=2\)
intAnswer \(=\) intNumA + intNumB *intNumC
```

Q5. This code modifies variables number1, number2 and result. What are the final values of these variables?

```
Dim number1 As Integer
Dim number2 As Integer
Dim result As Integer
number1 = 5 * (4 + 6)
number2 = 2 ^ 2
result = number1 \ number2
```

Q6. Find the error(s) in the following code, which uses variables to perform a calculation.

```
Dim number1 As Integer
Dim number2 As Integer
Dim result As Integer
number1 = (4* 6 ^ 4) / (10 Mod 4 - 2)
number2 = (16 \ 3) ^ 2 * 6 + 1
result = number1 - number2
```

Q7. Write a Visual Basic code that reads the radius of a circle from a textbox, assume that the textbox is text1, \& then calculate the area of the circle. The code should display the result of this operation to the user.

Q8. Write a Visual Basic code that reads 3 numbers from TextBoxes, stores them in variables then calculates their avarage. The output should be diplayed in a Label.

Q9. Create a simple a calculator application as shown in the following figure


The calculator allows a user to enter two numbers in the TextBoxes. There are four Buttons labeled,,$+- /$ and *. When the user clicks the Button labeled as addition, subtraction, multiplication or division, the application performs that operation on the numbers in the TextBoxes and displays the result. The calculator also should clear the calculation result when the user enters new input.

