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| Instructor |  | Due Date |  |

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| **Part** | **1** | **2** | **3** | **4** | **Total** |
| *Maximum Points* | **25** points | **25** points | **25** points | **25** points | **100**G101010 pointsG |
| ***Your Score*** |  |  |  |  |  |

**Textbook Reading Assignment**

Thoroughly read Chapter(s) 3 in your **Python** textbook.

**Part 1 Glossary Terms**

Define, in detail, each of these glossary terms from the realm of computer programming logic and design and computer topics, in general. If applicable, use examples to support your definitions. Consult your notes or course textbook(s) as references or the Internet by visiting Web sites such as:

|  |  |  |
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| http://www.askjeeves.com | http://www.webopedia.com | http://www.bing.com |

**(a) Boolean Value**

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| --- |
| Boolean values represent one of two statements: True or False. These are often evaluated using comparison operators and if statements. |

**(b) Decision Statement**

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| A decision statement tests a condition, and depending on the returned Boolean value (True/False), executes a conditional code block. Keywords such as “if, elif, else, and, or” are used to compare values when making decision statements. |

**(c) if Statement**

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| --- |
| Basic test, if something meets some criteria and returns a True or False bool, execute the if statement’s code block. |

**(d) if / else Statement**

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| If the test in the “if” statement doesn’t pass, we can use an “else” statement to execute an alternate code block. |

**(e) if / elif / else Statement**

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| --- |
| We can use `if / elif / else` to string together any number of tests (elif means else if), with a final “else” statement if all the test cases fail. |

**Part 2 Textbook Exercises - Python Decision Statements**

For each of the following, circle (a) if the answer is True, otherwise circle (b) for False.

**(1)** Given the statement below, if p is 6 , then q becomes 4 .

if(p == 6) : q = 4

**(a) True** (b) False

**(2)** Given the statement below, if q is 6 , then p becomes 4 .  
  
 if(p == 4) : q = 6

(a) True **(b) False**

**(3)** Given the statement below, if p is 6 , then q becomes 4 .  
  
 if(p != 6) : q = 4

(a) True **(b) False**

**(4)** Given the statement below, if q is 7 , then p becomes 4 .  
  
 if(q != 6) : p = 4

**(a) True** (b) False

**(5)** Given the statement below, if q is 4 , then q becomes 6 .   
  
 if(q >= 6) : q = 4

(a) True **(b) False**

**Part 3 Programming Exercises - Python Language Basics**

**(1)** **( DeMorgan’s Principles )**

According to DeMorgan’s Logic Principles, if p and q are logic statements, then:

(i) not ( p and q ) is equivalent to not( p ) or not( q )

and

(ii) not ( p or q ) is equivalent to not( p ) and not( q )

Use DeMorgan’s Principles to rewrite each of the following:

1. not (not ( p ) or not ( q ) )

**p or q**

(b) ( not ( p ) or not ( q ) ) and not ( q )

**not p or q**

**(2)** Write an if statement to determine if the Boolean variable named check1 is currently set to True. If it is, set the value of the Boolean variable check2 to False. Otherwise, set it to True.

**If(check1 == True):  
 check2 = False  
 else:  
 check2 = True**

**(3)** Write an if statement that determines whether the variable balance is greater than 400.00 . If it is, multiply the variable balance by 1.06 . Otherwise, multiply balance by 1.05 .

**If(balance > 400.00):**

**Balance\*=1.06  
 else:  
 balance\*=1.05**

**(4)** Assuming that an employee’s years of service is stored in the Integer variable intYears , write an if statement that will set the value of the Boolean variable blnAward to True, if the employee’s years of service is greater than 25 and less

than 35 . Otherwise, set the value of the Boolean variable to False.  
   
 **if(intYears > 25 and intYears < 35):  
 blnAward = True  
 else:  
 blnAward = False**

**(5)** Write an if / elif / else statement that tests the value of the integer   
 intNumber . If the value of intNumber is 0 , set the String variable named

chrResult to " F ". If the value of intNumber is 1 , set the String variable named chrResult to " P ". Otherwise, set the character variable named   
 chrResult to " I ".

**if(intNumber == 0):  
 chrResult = “F”  
 elif(intNumber == 1):  
 charResult = “P”  
 else:   
 charResult = “I”**

**Part 4 Programming Exercises ( Selection Control Structures )**

Write a complete program that prompts the user for a student’s status and grade point average ( GPA ) and then determines whether or not the student should be placed on the Dean’s list. Assume that a student is placed on the Dean’s list when he / she has full - time status and a GPA of at least 3.50 . Part - time students cannot be placed on the Dean’s list regardless of their GPA.

Attach your completed source code.  
  
status = input("Please enter your status: \n")

gpa = input(float("Please enter you GPA: \n"))

*if*(status == "Full Time" and gpa >= 3.50):

print("Congrats! You made the dean's list.")

*elif*(status == "Part Time"):

print("Part time students are not eligible")

*else*:

print("Better luck next semester!")