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| **Question 1.** What are the two values of the Boolean data type? How do you write them?  Answer:  The two values of the Boolean data type are: **True, False**.  Example:  a=10  b=20  print('the boolen value of a>b is', a>b)  print('the boolen value of a==b is', a==b)  print('the boolen value of a<b is', a<b)  output:  the boolen value of a>b is **False**  the boolen value of a==b is **False**  the boolen value of a<b is **True** |
| **Question 2**. What are the three different types of Boolean operators?  Answer:  The three different types of Boolean operators are: **And , Or, Not** |
| **Question 3**. Make a list of each Boolean operator's truth tables (i.e. every possible combination of Boolean values for the operator and what it evaluate ).  Answer: Truth Table for ‘and’ Operation:  | **A** | **B** | **A and B** | | --- | --- | --- | | False | False | False | | True | False | False | | False | True | False | | True | True | True |  Truth Table for ‘or’ Operation:  | **A** | **B** | **A or B** | | --- | --- | --- | | False | False | False | | True | False | True | | False | True | True | | True | True | True |  Truth Table for ‘not’ Operation:  | **X** | **not X** | | --- | --- | | True | False | | False | True | |
| **Question 4**. . What are the values of the following expressions?  (5 > 4) and (3 == 5)  not (5 > 4)  (5 > 4) or (3 == 5)  not ((5 > 4) or (3 == 5))  (True and True) and (True == False)  (not False) or (not True)  Answer:  (5 > 4) and (3 == 5) : **False**  not (5 > 4) : **False**  (5 > 4) or (3 == 5) : **True**  not ((5 > 4) or (3 == 5)): **False**  (True and True) and (True == False): **False**  (not False) or (not True) : **True** |
| **Question 5.** What are the six comparison operators?  Answer:  Six comparison operators are as follows:   * Less than ( < ) * Less than or equal to (<=) * Greater than (>) * Greater than or equal to (>=) * Equal to ( == ) * Not equal to (! = ) |
| **Question 6**. How do you tell the difference between the equal to and assignment operators? Describe a condition and when you would use one.  Answer:  Equal to (==) is a comparison operator, it is used to compare two values.  (=) is an assignment operator, it is used to assign value to the variable. |
| **Question** **7**. . Identify the three blocks in this code:  spam = 0  if spam == 10:  print('eggs')  if spam > 5:  print('bacon')  else:  print('ham')  print('spam')  print('spam')  Answer:   |  |  | | --- | --- | | spam = 0  if spam == 10:  print('eggs') | if block | | elif spam > 5:  print('bacon') | elif block | | else:  print('ham')  print('spam')  print('spam') | else block | |
| **Question 8**. Write code that prints Hello if 1 is stored in spam, prints Howdy if 2 is stored in spam, and prints Greetings! if anything else is stored in spam.  Answer:  spam = input('Enter 1 for hello, 2 for howdy, greetings! for anything else, entered value is ' )  if spam == '1':  print ('hello')  elif spam == '2':  print ('howdy')  else:  print ('greetings!') |
| **Question** **9**. If your programme is stuck in an endless loop, what keys you’ll press?  Answer:  Interrupt kernel and restart kernel is used if a programme is struck in endless loop. |
| **Question** **10**. How can you tell the difference between break and continue?  Answer:  The **break** statement terminates the loop containing it.  n = [1, 2, 3, 4, 5]  for i in n:  if i == 3:  break  print(i)  output:  1  2    The **continue** statement is used to skip the code inside a loop for the current iteration only. Loop does not terminate but continues on with next iteration.  for i in n:  if i == 3:  continue  print(i)  output:  1  2  4  5 |
| **Question** **11**. In a for loop, what is the difference between range(10), range(0, 10), and range(0, 10, 1)?  Answer:  range (10) : range(stop value by default)  range(0, 10): range (start , stop value)  range(0, 10, 1): range(start, stop, step value)  Output of all the above three values is range (0, 10) |
| **Question** **12**. Write a short program that prints the numbers 1 to 10 using a for loop. Then write an equivalent program that prints the numbers 1 to 10 using a while loop.  Answer:  # using for loop:  a =1  b=10  for i in range(a, b+1):  print(i, end=" ")  # using for loop:  a =1  b=10  while a<=b:  print (a, end= ' ')  a+= 1 |
| **Question** **13**. If you had a function named bacon() inside a module named spam, how would you call it after importing spam?  Answer:  import spam  spam.bacon() |