SOLUTIONS FOR THE FIRST REVIEW SESSION

COSC 1306
Fall 2017
First Question

- Which of the following statements are true or false?
  
  - Interpreted languages produce faster code than compiled languages.
First Question

Which of the following statements are true or false?

- Interpreted languages produce faster code than compiled languages.
  - FALSE
First Question

Which of the following statements are true or false?

- Having a large disk drive allows us to store more data on our computer.
First Question

Which of the following statements are true or false?

- Having a *large disk drive* allows us to *store* more data on our computer.

  - **TRUE**
First Question

Which of the following statements are true or false?

- Algorithms always provides the correct answer but can take *forever*.
First Question

- Which of the following statements are true or false?

  - Algorithms always provides the correct answer but can take forever.

    - FALSE
First Question

- Which of the following statements are true or false?

- The main memory is the part of the computer that executes your programs.
First Question

Which of the following statements are true or false?

- The main memory is the part of the computer that executes your programs.
  - FALSE
First Question

Which of the following statements are true or false?

- A three-bit binary number will never represent a number bigger than three.
First Question

Which of the following statements are true or false?

- A three-bit binary number will never represent a number bigger than three.
  - FALSE
First Question

Which of the following statements are true or false?

- Python expressions always return a value.
First Question

Which of the following statements are true or false?

- Python expressions always return a value.
  - TRUE
First Question

Which of the following statements are true or false?

- Having a *large disk drive* allows us to *store* more data on our computer.
First Question

- Which of the following statements are true or false?
  - Having a large disk drive allows us to store more data on our computer.
    - TRUE
First Question

- Which of the following statements are true or false?

- Programs without comments are harder to read by humans.
First Question

- Which of the following statements are true or false?
  - **Programs without comments are harder to read by humans.**
    - **TRUE**
First Question

Which of the following statements are true or false?

- In Python, `Total` and `total` are two different variable names.
First Question

Which of the following statements are true or false?

- In Python, `Total` and `total` are two different variable names.
  - TRUE
First Question

Which of the following statements are true or false?

- The Python 3 `input()` function always returns a string.
First Question

- Which of the following statements are true or false?

  - The Python 3 `input()` function always returns a string.
    - TRUE
First Question

Which of the following statements are true or false?

- You cannot run Python programs on a computer that does not have the Python interpreter installed.
First Question

Which of the following statements are true or false?

- You cannot run Python programs on a computer that does not have the Python interpreter installed.
  - TRUE
Second question

What are the values of the variables a, b, c, and d after the following Python code is executed?

```python
a = 6//7
b = "3" + "4"
c = 1/2 + 2
d = 2**1**2
```
Second question

What are the values of the variables $a$, $b$, $c$, and $d$ after the following Python code is executed?

- $a = 6//7$
- $b = "3" + "4"
- $c = 1/2 + 2$
- $d = 2**1**2$

- $a = 0$
Second question

What are the values of the variables $a$, $b$, $c$, and $d$ after the following Python code is executed?

- $a = 6//7$
- $b = "3" + "4"
- $c = 1/2 + 2$
- $d = 2**1**2$

- $a = 0$  $b = '34'$
Second question

What are the values of the variables $a$, $b$, $c$, and $d$ after the following Python code is executed?

- $a = 6//7$
  - $b = "3" + "4"
  - $c = 1/2 + 2$
  - $d = 2**1**2$

- $a = 0$  $b = '34'$  $c = 2.5$
Second question

What are the values of the variables $a$, $b$, $c$, and $d$ after the following Python code is executed?

- $a = 6//7$
  $b = "3" + "4"
  c = 1/2 + 2$
  $d = 2**1**2$

- $a = 0$  $b = '34'$  $c = 2.5$  $d = 2$

Because $2**1**2 = 2**(1**2)$
Third question

- Convert the following five binary numbers to know something about yourself.

  - 011 = ____
  - 001 = ____
  - 011 = ____
  - 011 = ____
  - 111 = ____
Third question

- Convert the following five binary numbers to know something about yourself.

  - 011 = 2 + 1 = 3

  - 001 = _____

  - 011 = _____

  - 011 = _____

  - 111 = _____
Third question

- Convert the following five binary numbers to know something about yourself.

  - 011 = \(2 + 1 = 3\)
  - 001 = 1
  - 011 = \_
  - 011 = \_
  - 111 = \_
  - 111 = \_
Third question

- Convert the following five binary numbers to know something about yourself.

  - 011 = 2 + 1 = 3
  - 001 = 1
  - 011 = 2 + 1 = 3
  - 011 = 2 + 1 = 3
  - 111 = ____
Third question

- Convert the following five binary numbers to know something about yourself.

  - 011 = 2 + 1 = 3
  - 001 = 1
  - 011 = 2 + 1 = 3
  - 011 = 2 + 1 = 3
  - 111 = 4 + 2 + 1 = 7

You are 31337 = ELEET = ELITE
Fourth question

Which Boolean expression is represented by the following circuit?

\[ p \quad q \quad r \]
Fourth question

Which Boolean expression is represented by the following circuit?

- p or (q and r)
Fifth question

Which of these Python expressions are equivalent?

- $a + (b*c)$
- $(a*b)**2$
- $a + b/c$
- $a*b/c*d$
- $a + b*c$
- $a*b**c$
- $(a + b)/c$
- $(a*b)/c*d$
Fifth question

Which of these Python expressions are equivalent?

- \( a + (b \times c) \) \hspace{1cm} \( a + b \times c \)
  - EQUIVALENT

- \( (a \times b)^2 \) \hspace{1cm} \( a \times b \times c \)

- \( a + b \div c \) \hspace{1cm} \( (a + b) \div c \)

- \( a \times b \div c \times d \) \hspace{1cm} \( (a \times b) \div c \times d \)
Fifth question

- Which of these Python expressions are equivalent?
  - $a + (b*c)$  $a + b*c$
    - EQUIVALENT
  - $(a*b)**2$  $a*b**c$
    - NOT EQUIVALENT
  - $a + b/c$  $(a + b)/c$
  - $a*b/c*d$  $(a*b)/c*d$
Fifth question

Which of these Python expressions are equivalent?

- $a + (b*c)$  $a + b*c$
  - EQUIVALENT

- $(a*b)**2$  $a*b**c$
  - NOT EQUIVALENT

- $a + b/c$  $(a + b)/d$
  - NOT EQUIVALENT

- $a*b/c*d$  $(a*b)/c*d$
Fifth question

- Which of these Python expressions are equivalent?
  - $a + (b*c)$ and $a + b*c$
    - EQUIVALENT
  - $(a*b)**2$ and $a*b**c$
    - NOT EQUIVALENT
  - $a + b/c$ and $(a + b)/c$
    - NOT EQUIVALENT
  - $a*b/c*d$ and $(a*b)/c*d$
    - EQUIVALENT
Sixth question

You are asked to reorder the following Python statements so they form a program computing the cost per ounce of an item:

```python
price = float(input("Enter the price: "))
print("Its cost per ounce is $%.2f" % unitCost)
nOunces = float(input("Enter the number of ounces of product: "))
unitCost = price/nOunces
```
Sixth question

- You are asked to reorder the following Python statements so they form a program computing the cost per ounce of an item:

```python
price = float(input("Enter the price: "))
nOunces = float(input("Enter the number of ounces of product: "))
unitCost = price/nOunces
print("Its cost per ounce is $%.2f" % unitCost)
```