

CS 2316 Final Exam Practice Questions

ANSWER KEY

- Signing signifies that you agree to the terms of the **Academic Honor Code of Georgia Tech**.
- Calculators and cell phones are NOT allowed.
- This is a Python programming test. Where asked for Python statements or expressions you must print them exactly as they would be typed in a Python source file or interactive shell.

Completely fill in the box corresponding to your answer choice for each question.

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|-----|-------|-------|-------|-------|
| 1. | ■■■ | [B] | [C] | [D] |
| 2. | [A] | [B] | [C] | ■■■ |
| 3. | [A] | [B] | ■■■ | [D] |
| 4. | [A] | ■■■ | [C] | [D] |
| 5. | ■■■ | [B] | [C] | [D] |
| 6. | [A] | ■■■ | [C] | [D] |
| 7. | [A] | [B] | ■■■ | [D] |
| 8. | [A] | [B] | [C] | ■■■ |
| 9. | [A] | [B] | [C] | ■■■ |
| 10. | [A] | [B] | [C] | ■■■ |
| 11. | [A] | [B] | [C] | ■■■ |
| 12. | ■■■ | [B] | [C] | [D] |
| 13. | [A] | [B] | [C] | ■■■ |
| 14. | [A] | [B] | [C] | ■■■ |
| 15. | [A] | [B] | ■■■ | [D] |
| 16. | [A] | [B] | [C] | ■■■ |
| 17. | [A] | [B] | ■■■ | [D] |
| 18. | [A] | [B] | ■■■ | [D] |
| 19. | [A] | [B] | ■■■ | [D] |
| 20. | [A] | [B] | [C] | ■■■ |
| 21. | ■■■ | [B] | [C] | [D] |
| 22. | [A] | ■■■ | [C] | [D] |
| 23. | [A] | [B] | ■■■ | [D] |
| 24. | [A] | [B] | ■■■ | [D] |
| 25. | [A] | [B] | [C] | ■■■ |
| 26. | [A] | [B] | ■■■ | [D] |
| 27. | [A] | ■■■ | [C] | [D] |
| 28. | ■■■ | [B] | [C] | [D] |

Number missed: _____ Final Score: _____

- [4] 1. What is printed after the last line in this snippet of Python code (in place of the ???):

```
>>> class = "CS 2316"
???
```

- A. `SyntaxError: invalid syntax`
- B. `CS 2316`
- C. `defined variable: class = 'CS 2316'`
- D. Nothing will be printed before displaying the `>>>` prompt.

- [4] 2. Given the following contents of the file `say.py`, which has been set as executable:

```
#!/usr/bin/env python3

def say(something, times = 1):
    print(something * times)

if __name__ == '__main__':
    say('test', 2)
```

Which of the following would execute this as a script from the command line?

- A. `./say.py`
- B. `python3 say.py`
- C. None of the above.
- D. **A and B above.**

- [4] 3. Given `say.py` from the previous question, what is printed after the last line in this snippet of Python code (in place of the ???):

```
>>> import say
???
```

- A. `'testtest'`
- B. `testtest`
- C. **Nothing will be printed before displaying the `>>>` prompt.**

- [4] 4. What's the value of the expression `"Honey" + "Boo" * 2`

- A. `'HoneyBooHoneyBoo'`
- B. `'HoneyBooBoo'`
- C. `'HoneyBoo2'`
- D. `'HoneyBoo*2'`

- [4] 5. Given the following code:

```
capitals = {}
capitals['Murica'] = 'Warshington'
capitals['Germany'] = 'Bonn'
capitals['France'] = 'Paris'
capitals['Engalnd'] = 'London'
capitals['Germany'] = 'Berlin'
```

What is `capitals['Germany']`?

- A. `'Berlin'`
- B. `'Sweden'`
- C. `'Paris'`
- D. `'London'`

- [4] 6. What is `len(set(['A', 'b', 'b', 'a']))`
- A. 2
 - B. 3**
 - C. 4
 - D. 0

- [4] 7. What's the value of the expression `''.join('h a n d s'.split())`
- A. ['h', 'a', 'n', 'd', 's']
 - B. 'h a n d s'
 - C. 'hands'**
 - D. None

- [4] 8. What is printed after the last line in this snippet of Python code (in place of the ???):

```
>>> greeting = 'Hi ya!'
>>> def greet(greeting):
...     print(greeting)
...
>>> greeting
'Hi ya!'
>>> greet('Hello')
???
```

- A. None
- B. Hi ya!
- C. greeting**
- D. Hello

- [4] 9. If a Python program is invoked on the command line like this:

```
python arguments.py one two three
```

within the Python program, `arguments.py`, what is the value of `sys.argv[1:]` (assuming `sys` has been imported)?

- A. ['arguments.py', 'one', 'two', 'three']
- B. 'one'
- C. ['python', 'arguments.py', 'one', 'two', 'three']**
- D. ['one', 'two', 'three']

[4] 10. What is printed after the last line in this snippet of Python code (in place of the ???):

```
>>> animal = 'Peacock'
>>> for animal in ['Giraffe', 'Alligator', 'Liger']:
...     print(animal)
...
Giraffe
Alligator
Liger
>>> animal
???
```

- A. Peacock
- B. Alligator
- C. Giraffe
- D. Liger

[4] 11. Given the following CSV file contents:

```
one; two; three
'a'; 'b'; 'c'
'd'; 'e'; 'f'
'g'; 'e'; 'h'
```

If you read the CSV file above with a `csv.DictReader` like this:

```
reader = csv.DictReader(csvfile, delimiter=';', quotechar=None)
```

what would it return for the first record?

- A. ['one', 'two', 'three']
- B. ('a', 'b', 'c')
- C. {None: 'one', None: 'two', None: 'three'}
- D. {'one': "'a'", 'two': "'b'", 'three': "'c'"}

[4] 12. Which of the following files is **not** a text file?

- A. JPEG file
- B. XML file
- C. CSV file
- D. Python module (.py) file

[4] 13. Say we have an XML file named `people.xml` and the line `import xml.etree.ElementTree as et`, which of the following lines parses the `people.xml` file and assigns the resulting `ElementTree` object to the variable `people`?

- A. `people = xml.ElementTree.read("people.xml")`
- B. `people = xml.ElementTree.parse("people.xml")`
- C. `people = xml.etree.ElementTree.load("people.xml")`
- D. `people = et.parse("people.xml")`

[4] 14. Given the following contents of `people.xml`:

```
<?xml version="1.0"?>
<people>
  <person>
    <firstName>Alan</firstName>
    <lastName>Turing</lastName>
    <profession>Computer Scientist</profession>
  </person>
  <person>
    <firstName>Stephen</firstName>
    <lastName>Hawking</lastName>
    <profession>Physicist</profession>
  </person>
</people>
```

and the correct answer to the previous question, which of the following expressions has the value `'Hawking'`?

- A. `people[1].find('lastName').text`
- B. `people.get('person').get('lastName').text`
- C. `people('person')[2].find('lastName').text`
- D. `people.findall('person')[1].find('lastName').text`

[4] 15. Given the following imports and definitions:

```
import json
json_string = """
[
  {1: 'one', 2: 'two', 3: 'three'},
  {1: 'un', 2: 'deux', 3: 'trois'},
  {1: 'eins', 2: 'zwei', 3: 'drei'}
]
"""
```

what is the value of `json.loads(json_string)[1][2]`?

- A. `'one'`
- B. `'un'`
- C. `'deux'`
- D. `'trois'`

[4] 16. Given

```
select * from troopers;
field1 field2
-----
Mac      Y
Thorny   Y
Rabbit   N
Farva    Y
```

and the following Python code that reads this table:

```
conn = sqlite3.connect("troopers.sqlite3")
curs = conn.cursor()
curs.execute("select * from troopers")
results = []
for row in curs.fetchall():
    results.append(row)
```

What is the value of `results[2][1]`?

- A. 'Thorny'
- B. 'Rabbit'
- C. 'Y'
- D. 'N'

[4] 17. Given a table named `author`, which of the following SQL statements will return a table with all the columns for all the rows?

- A. `select all from author`
- B. `get * from author`
- C. `select * from author`
- D. `get all from author`

[4] 18. What does HTML stand for?

- A. Hyper-Threaded Machine Language
- B. High-Throughput Machine Learning
- C. **Hyper-Text Markup Language**

[4] 19. What does it mean to "render" HTML?

- A. To melt the HTML for lard.
- B. To compile the HTML in to bytecode for execution by the Java Virtual Machine.
- C. **To interpret the markup and content and present a textual and graphical representation, typically in a web browser.**

- [4] 20. Which elements are required to be in a valid HTML document?
- A. `<html></html>`
 - B. `<head></head>`
 - C. `<body></body>`
 - D. **All of the above.**
- [4] 21. HTML files are plain text files.
- A. **True**
 - B. False
- [4] 22. Which of the following URLs specifies a resource to be loaded using the hyper-text transfer protocol?
- A. `ftp://releases.ubuntu.com/releases/14.04`
 - B. `http://www.gatech.edu/`
 - C. `file:///Users/chris/work/vcs/github/data-python/code/web/hello.html`
 - D. None of the above.
- [4] 23. Which HTML tag would you use to create a hyperlink to another web page?
- A. List tag, ``
 - B. Paragraph tag, `<p></p>`
 - C. **Anchor tag, `<a ...>`**
 - D. Link tag, `<link ...></link>`
- [4] 24. What's would `'foobar'.find('o')` return?
- A. None
 - B. 0
 - C. **1**
 - D. `'o'`
- [4] 25. What would `'foobar'.replace('bar', 'fighter')` return?
- A. `'foobarfighter'`
 - B. `'foo fighter'`
 - C. `'kungfoofighter'`
 - D. `'foofighter'`
- [4] 26. What would `'landing'.strip()` return?
- A. `'landingstrip'`
 - B. `['landing']`
 - C. `'landing'`
 - D. `['landing', 'strip']`
- [4] 27. What would `>>> re.findall(r'a.a', 'abracadabra')` return?
- A. `['aca', 'ada']`
 - B. `['aca']`
 - C. `'aca'`
 - D. `'ada'`
- [4] 28. Which of the following strings would match the regular expression `\d{3}-\d{4}`?
- A. 867-5309
 - B. (867)-5309
 - C. (867) 5309