**Starting Out with Python 4e (Gaddis)**

**Chapter 6 Files and Exceptions**

**TRUE/FALSE**

1. If a file with the specified name already exists when the file is opened and the file is opened in **'w'** mode, then an alert will appear on the screen.

ANS: F

2. When a piece of data is read from a file, it is copied from the file into the program.

ANS: F

3. Closing a file disconnects the communication between the file and the program.

ANS: T

4. In Python, there is nothing that can be done if the program tries to access a file to read that does not exist.

ANS: F

5. Python allows the programmer to work with text and number files.

ANS: F

6. The **ZeroDivisionError** exception is raised when the program attempts to perform the calculation **x/y** if **y = 0**.

ANS: T

7. An exception handler is a piece of code that is written using the **try/except** statement.

ANS: T

8. If the last line in a file is not terminated with **\n**, the **readline** method will return the line without **\n**.

ANS: T

9. Strings can be written directly to a file with the **write** method, but numbers must be converted to strings before they can be written.

ANS: T

10. It is possible to create a **while** loop that determines when the end of a file has been reached.

ANS: T

**MULTIPLE CHOICE**

1. Which of the following is associated with a specific file and provides a way for the program to work with that file?

|  |  |
| --- | --- |
| a. | the filename |
| b. | the file extension |
| c. | the file object |
| d. | the file variable |

ANS: C

2. What is the process of retrieving data from a file called?

|  |  |
| --- | --- |
| a. | retrieving data |
| b. | reading data |
| c. | reading input |
| d. | getting data |

ANS: B

3. Which of the following describes what happens when a piece of data is written to a file?

|  |  |
| --- | --- |
| a. | The data is copied from a variable in RAM to a file. |
| b. | The data is copied from a variable in the program to a file. |
| c. | The data is copied from the program to a file. |
| d. | The data is copied from a file object to a file. |

ANS: A

4. Which step creates a connection between a file and a program?

|  |  |
| --- | --- |
| a. | open the file |
| b. | read the file |
| c. | process the file |
| d. | close the file |

ANS: A

5. How many types of files are there?

|  |  |
| --- | --- |
| a. | one |
| b. | two |
| c. | three |
| d. | more than three |

ANS: B

6. A(n) \_\_\_\_\_\_\_\_\_\_ access file is also known as a direct access file.

|  |  |
| --- | --- |
| a. | sequential |
| b. | random |
| c. | numbered |
| d. | text |

ANS: B

7. Which type of file access jumps directly to a piece of data in the file without having to read all the data that comes before it?

|  |  |
| --- | --- |
| a. | sequential |
| b. | random |
| c. | numbered |
| d. | text |

ANS: B

8. A single piece of data within a record is called a

|  |  |
| --- | --- |
| a. | variable |
| b. | delimiter |
| c. | field |
| d. | data bit |

ANS: C

9. Which mode specifier will erase the contents of a file if it already exists and create the file if it does not already exist?

|  |  |
| --- | --- |
| a. | **'w'** |
| b. | **'r'** |
| c. | **'a'** |
| d. | **'e'** |

ANS: A

10. Which mode specifier will open a file but not let you change the file or write to it?

|  |  |
| --- | --- |
| a. | **'w'** |
| b. | **'r'** |
| c. | **'a'** |
| d. | **'e'** |

ANS: B

11. Which method could be used to strip specific characters from the end of a string?

|  |  |
| --- | --- |
| a. | **estrip** |
| b. | **rstrip** |
| c. | **strip** |
| d. | **remove** |

ANS: B

12. Which method could be used to convert a numeric value to a string?

|  |  |
| --- | --- |
| a. | **str** |
| b. | **value** |
| c. | **num** |
| d. | **chr** |

ANS: A

13. Which method will return an empty string when it has attempted to read beyond the end of a file?

|  |  |
| --- | --- |
| a. | **read** |
| b. | **getline** |
| c. | **input** |
| d. | **readline** |

ANS: D

14. Which statement can be used to handle some of the runtime errors in a program?

|  |  |
| --- | --- |
| a. | an **exception** statement |
| b. | a **try** statement |
| c. | a **try/except** statement |
| d. | an **exception handler** statement |

ANS: C

15. Given that the **customer** file references a file object, and the file was opened using the **'w'** mode specifier, how would you write the string **'Mary Smith'** to the file?

|  |  |
| --- | --- |
| a. | **customer file.write('Mary Smith')** |
| b. | **customer.write('w', 'Mary Smith')** |
| c. | **customer.input('Mary Smith')** |
| d. | **customer.write('Mary Smith')** |

ANS: D

16. When a file has been opened using the **'r'** mode specifier, which method will return the file's contents as a string?

|  |  |
| --- | --- |
| a. | **write** |
| b. | **input** |
| c. | **get** |
| d. | **read** |

ANS: D

17. Which of the following is the correct way to open a file named **users.txt** in **'r'** mode?

|  |  |
| --- | --- |
| a. | **infile = open('r', users.txt)** |
| b. | **infile = read('users.txt', 'r')** |
| c. | **infile = open('users.txt', 'r')** |
| d. | **infile = readlines('users.txt', r)** |

ANS: C

18. Which of the following is the correct way to open a file named **users.txt** to write to it?

|  |  |
| --- | --- |
| a. | **outfile = open('w', users.txt)** |
| b. | **outfile = write('users.txt', 'w')** |
| c. | **outfile = open('users.txt', 'w')** |
| d. | **outfile = open('users.txt')** |

ANS: C

19. What will be the output after the following code is executed and the user enters **75** and **0** at the first two prompts?

**def main():**

**try:**

**total = int(input("Enter total cost of items? "))**

**num\_items = int(input("Number of items "))**

**average = total / num\_items**

**except ZeroDivisionError:**

**print('ERROR: cannot have 0 items')**

**except ValueError:**

**print('ERROR: number of items cannot be negative')**

**main()**

|  |  |
| --- | --- |
| a. | **ERROR: cannot have 0 items** |
| b. | **ERROR: number of items can't be negative** |
| c. | **0** |
| d. | Nothing; there is no **print** statement to display **average**. |

ANS: A

20. What will be the output after the following code is executed and the user enters **75** and **-5** at the first two prompts?

**def main():**

**try:**

**total = int(input("Enter total cost of items? "))**

**num\_items = int(input("Number of items "))**

**average = total / num\_items**

**except ZeroDivisionError:**

**print('ERROR: cannot have 0 items')**

**except ValueError:**

**print('ERROR: number of items cannot be negative')**

**main()**

|  |  |
| --- | --- |
| a. | **ERROR: cannot have 0 items** |
| b. | **ERROR: cannot have 0 items**  **ERROR: number of items can't be negative** |
| c. | **ERROR: number of items can't be negative** |
| d. | Nothing; there is no **print** statement to display **average**. The **ValueError** will not catch the error. |

ANS: D

**COMPLETION**

1. When a program needs to save data for later use, it writes the data in a(n) \_\_\_\_\_\_\_\_\_\_\_.

ANS: file

2. Programmers usually refer to the process of \_\_\_\_\_\_\_\_\_\_ data in a file as writing data to the file.

ANS: saving

3. When data is written to a file, it is described as a(n) \_\_\_\_\_\_\_\_\_\_ file.

ANS: output

4. If data is retrieved from a file by a program, this is known by the term \_\_\_\_\_\_\_\_\_\_ file.

ANS: input

5. A(n) \_\_\_\_\_\_\_\_\_\_\_ file contains data that has been encoded as text, using a scheme such as ASCII.

ANS: text

6. A(n) \_\_\_\_\_\_\_\_\_\_\_ access file retrieves data from the beginning of the file to the end of the file.

ANS: sequential

7. A(n) \_\_\_\_\_\_\_\_\_\_ file contains data that has not been converted to text.

ANS: binary

8. A filename \_\_\_\_\_\_\_\_\_\_ is a short sequence of characters that appear at the end of a filename, preceded by a period.

ANS: extension

9. A(n) \_\_\_\_\_\_\_\_\_\_ gives information about the line number(s) that caused an exception.

ANS: traceback

10. A(n) \_\_\_\_\_\_\_\_\_\_\_ block includes one or more statements that can potentially raise an exception.

ANS: **try** block