**Module 9. File and Exception Handling**

**TRUE/FALSE**

1. The open() function is used to open a file in Python.

Answer: True

1. Using the 'x' mode in open() creates a file if it does not exist and raises an error if it does.

Answer: True

1. The 'r' mode allows you to read and write to a file.

Answer: False

1. The 'w' mode creates a new file if it does not exist.

Answer: True

1. The 'a' mode appends content to the end of a file, deleting its existing content.

Answer: False

1. In binary mode ('b'), files are opened in binary format which is suitable for text files.

Answer: False

1. The readlines() method reads all lines from a file and returns them as a list.

Answer: True

1. The read() method reads the entire content of the file into a string.

Answer: True

1. Using with open() ensures the file is closed properly after its suite finishes, even if an error occurs.

Answer: True

1. The write() method in 'w' mode will append data to the end of the file.

Answer: False

1. A FileNotFoundError occurs when a file that is supposed to be opened does not exist.

Answer: True

1. The finally block executes only if an exception occurs.

Answer: False

1. The except block catches and handles exceptions.

Answer: True

1. The close() method is not necessary when using with open().

Answer: True

1. A custom exception can be defined by extending the base Exception class.

Answer: True

1. The try block contains code that might raise an exception.

Answer: True

1. The raise keyword is used to manually trigger an exception.

Answer: True

1. An IOError is raised for input/output operations failing.

Answer: True

1. When an error occurs, the program stops executing immediately without any chance to handle it.

Answer: False

1. The finally block is optional in exception handling.

Answer: True

1. You can handle multiple specific exceptions using multiple except blocks.

Answer: True

1. The 'r' mode raises an error if the file does not exist.

Answer: True

1. You cannot use the 'b' mode with text files.

Answer: True

1. A file must always be explicitly closed to avoid memory leaks.

Answer: False

1. Exception handling in Python ensures that resources are properly released.

Answer: True

**MULTIPLE CHOICE**

1. What mode is used to open a file for writing, creating it if it does not exist?

a. 'r'

b. 'a'

c. 'w'

d. 'x'

Answer: c

1. What does the read() method do?

a. Reads the entire content of a file into a list

b. Reads a single line from the file

c. Reads the entire content of a file into a string

d. Reads a single character from the file

Answer: c

1. Which mode appends content to the end of the file without removing existing content?

a. 'r'

b. 'w'

c. 'a'

d. 'x'

Answer: c

1. What is the purpose of the close() method?

a. To open a file for reading

b. To write data to a file

c. To close an opened file and release resources

d. To delete a file

Answer: c

1. Which statement is used to handle exceptions in Python?

a. catch

b. try/except

c. try/finally

d. error

Answer: b

1. When opening a file in binary mode, which mode specifier should be used?

a. 't'

b. 'b'

c. 'r'

d. 'w'

Answer: b

1. What happens when a file opened in 'w' mode already exists?

a. An error is raised

b. The file is overwritten

c. Data is appended to the file

d. The file is deleted

Answer: b

1. What does the readlines() method return?

a. A string

b. A list of lines

c. A single line

d. A dictionary

Answer: b

1. Which block is used to handle code that must be executed regardless of an exception occurring or not?

a. try

b. except

c. else

d. finally

Answer: d

1. How do you ensure that a file is properly closed after its suite finishes?

a. Using open()

b. Using with open()

c. Using close()

d. Using try/except

Answer: b

1. What error occurs when trying to open a non-existent file for reading?

a. IOError

b. FileNotFoundError

c. ValueError

d. TypeError

Answer: b

1. What is the purpose of the with statement?

a. To handle exceptions

b. To manage file context

c. To write data to a file

d. To read data from a file

Answer: b

1. Which of the following modes opens a file for exclusive creation?

a. 'w'

b. 'r'

c. 'x'

d. 'a'

Answer: c

1. How do you manually trigger an exception in Python?

a. except

b. raise

c. finally

d. throw

Answer: b

1. What happens if you attempt to read from a file that does not exist without exception handling?

a. The program continues executing

b. An error is raised

c. A warning is issued

d. The file is created

Answer: b

1. Which method is used to write data to a file?

a. write()

b. read()

c. readlines()

d. open()

Answer: a

1. What keyword is used to define a custom exception class in Python?

a. class

b. def

c. try

d. except

Answer: a

1. Which mode should you use to read a file that contains non-text data?

a. 't'

b. 'w'

c. 'r'

d. 'b'

Answer: d

1. How can you handle multiple specific exceptions in Python?

a. Using multiple except blocks

b. Using a single except block

c. Using finally block

d. Using else block

Answer: a

1. What does the strip() method do when reading lines from a file?

a. Removes whitespace from the start and end of a string

b. Converts the string to uppercase

c. Reads the file line by line

d. Appends a new line to the file

Answer: a

1. Which of the following is a common use of the finally block?

a. To handle exceptions

b. To clean up resources

c. To open a file

d. To write data to a file

Answer: b

1. What type of error is raised if a file operation fails due to insufficient permissions?

a. ValueError

b. IOError

c. TypeError

d. NameError

Answer: b

1. How do you ensure that an error message is printed when a FileNotFoundError occurs?

a. Use print() inside the try block

b. Use print() inside the except block

c. Use print() inside the finally block

d. Use print() inside the else block

Answer: b

1. What does the as keyword do in an except block?

a. Assigns the exception object to a variable

b. Raises a new exception

c. Suppresses the exception

d. Ignores the exception

Answer: a

1. What is the default mode when opening a file using the open() function without specifying a mode?

a. 'w'

b. 'r'

c. 'a'

d. 'b'

Answer: b