# Define questions and answers in a dictionary

Quiz\_data = {

“What is the capital of France?”: {

“options”: [“a) London”, “b) Paris”, “c) Berlin”, “d) Rome”],

“correct”: “b”

},

“Who wrote the play ‘Romeo and Juliet’?”: {

“options”: [“a) William Shakespeare”, “b) Charles Dickens”, “c) Mark Twain”, “d) Jane Austen”],

“correct”: “a”

},

“What is the chemical symbol for water?”: {

“options”: [“a) O₂”, “b) H₂O”, “c) CO₂”, “d) N₂O”],

“correct”: “b”

},

“Which planet is known as the Red Planet?”: {

“options”: [“a) Venus”, “b) Earth”, “c) Mars”, “d) Jupiter”],

“correct”: “c”

},

“Which of the following is the largest ocean on Earth?”: {

“options”: [“a) Atlantic Ocean”, “b) Indian Ocean”, “c) Arctic Ocean”, “d) Pacific Ocean”],

“correct”: “d”

},

“What is the currency used in Japan?”: {

“options”: [“a) Yen”, “b) Dollar”, “c) Euro”, “d) Peso”],

“correct”: “a”

},

“In which year did the Titanic sink?”: {

“options”: [“a) 1900”, “b) 1912”, “c) 1920”, “d) 1898”],

“correct”: “b”

},

“Who painted the Mona Lisa?”: {

“options”: [“a) Vincent van Gogh”, “b) Leonardo da Vinci”, “c) Pablo Picasso”, “d) Claude Monet”],

“correct”: “b”

},

“What is the largest planet in our solar system?”: {

“options”: [“a) Earth”, “b) Saturn”, “c) Jupiter”, “d) Neptune”],

“correct”: “c”

},

“What is the freezing point of water in Celsius?”: {

“options”: [“a) 0°C”, “b) 32°F”, “c) 100°C”, “d) -32°C”],

“correct”: “a”

}

}

# Initialize variables

Score = 0

Total\_questions = len(quiz\_data)

# Loop through each question in the quiz

For question, data in quiz\_data.items():

Print(f”\n{question}”)

# Display the options

For option in data[“options”]:

Print(option)

# Input validation loop

Answer = “”

While answer not in [‘a’, ‘b’, ‘c’, ‘d’]:

Answer = input(“Please select your answer (a, b, c, or d): “).lower()

If answer not in [‘a’, ‘b’, ‘c’, ‘d’]:

Print(“Invalid input. Please enter a valid option (a, b, c, or d).”)

# Check if the answer is correct

If answer == data[“correct”]:

Score += 1

Print(“Correct!”)

Else:

Print(“Incorrect.”)

# Display the final score

Print(f”\nYour final score is {score}/{total\_questions}.”)