Experiment 5: Input:

Part 1:

```
# Branch: Computer
# Year: 2025
# Sem: 4
# Name: Mohd Qayam
# UIN: 231P038
# Roll No.: 02

print("**************************")
print("Interactive Calculator")
print("Mohd Qayam")
print("**************************")

class FormulaError(Exception):
    pass

while True:
    try:
        user_input = input(">>> ")
        if user_input == "quit":
            break
        input_list = user_input.split()
        if len(input_list) != 3:
            raise FormulaError("Invalid input")
        num1 = float(input_list[0])
        operator = input_list[1]
        num2 = float(input_list[2])
        if operator == "+":
            result = num1 + num2
        elif operator == "-":
            result = num1 - num2
        else:
            raise FormulaError("Invalid operator")
        print(result)
    except FormulaError as e:
        print(e)
```

Part 2:

```
# Branch: Computer
# Year: 2025
# Sem: 4
# Name: Mohd Qayam
# UIN: 231P038
# Roll No.: 02

print("**************************")
print("User-defined Exception")
```

```
print("Mohd Qayam")
print("**************************")

class InvalidInputError(Exception):
    pass

while True:
    try:
        num = int(input("Enter a number: "))
        if num < 0:
            raise InvalidInputError("Number cannot be negative")
        break
    except ValueError:
        print("Invalid input. Please enter a valid number.")
    except InvalidInputError as e:
        print(e)

Part 3:
# AIM: Write a program in Python that validates names and age as entered by
the user to determine
#      whether the person can cast vote or not using exception handling.
# Branch: Computer
# Year: 2025
# Sem: 4
# Name: Mohd Qayam
# UIN: 231P038
# Roll No.: 02

print("**************************")
print("Vote Eligibility")
print("Mohd Qayam")
print("**************************")

name = input("Enter your name: ")
while True:
    try:
        age = int(input("Enter your age: "))
        if age >= 18:
            print("You are eligible to vote.")
            break
        else:
            print("You are not eligible to vote.")
            break
    except ValueError:
        print("Invalid input. Please enter a valid age.")

Part 4:
```

```
# AIM: Write a Program in python to demonstrate user defined exception. (month
no.is input 1-12, above
# 12 is exception).
# Branch: Computer
# Year: 2025
# Sem: 4
# Name: Mohd Qayam
# UIN: 231P038
# Roll No.: 02

print("**************************")
print("User-defined Exception Part 2")
print("Mohd Qayam")
print("**************************")

class MonthError(Exception):
    pass

months = ["January", "February", "March", "April", "May", "June", "July",
"August", "September", "October", "November", "December"]

try:
    month = int(input("Enter a month number (1-12): "))
    if month < 1 or month > 12:
        raise MonthError("Invalid month number")
    else:
        print(months[month-1])
except ValueError:
    print("Invalid input. Please enter a number.")
except MonthError as e:
    print(e)
```

```
**************************
>>> 1 + 1
2.0
>>> 3.2 - 1.5
1.7000000000000002
>>> quit
```

```
**************************
Vote Eligibility
Adyan Shaikh
**************************
Enter your name: Adyan
Enter your age: a
Invalid input. Please enter a valid
Enter your age: -10
You are not eligible to vote.
```

```
**************************
Enter a number: a
Invalid input. Please enter a valid number.
Enter a number: -10
Number cannot be negative
Enter a number: 10
```

```
**************************
User-defined Exception Part 2
Adyan Shaikh
**************************
Enter a month number (1-12): a
Invalid input. Please enter a number.
Enter a month number (1-12): -1
Invalid month number
Enter a month number (1-12): 10
October
```