

```
1 def cc(fun):
2     print("1")
3
4     def inner():
5         print(2)
6         fun()
7         print(4)
8     return inner()
9
10
11 @cc
12 def zz():
13     print(3)
14
```

TEST01 ×

D:\pycharm\pyqt5\venv\Scripts\python.exe D:/pycharm/pyqt5/TEST01.py

```
1
2
3
4
```

Process finished with exit code 0

解释：装饰器的执行顺序，先调用装饰函数，调用内置函数，再执行被装饰函数

The image shows a PyCharm IDE window with a project named 'pyqt5'. The file explorer on the left shows the project structure, including a 'venv' directory. The main editor displays the code in 'TEST01.py'.

```
1  def cc(fun):
2      print("1")
3
4      def inner():
5          print(2)
6          fun()
7          print(4)
8
9      return inner()
10
11
12  def zz():
13      print(3)
14
15
16  cc(zz)
17
```

The bottom panel shows the execution of the script. The command prompt displays the path to the Python interpreter and the script file, followed by the output of the script.

```
un: TEST01 x
D:\pycharm\pyqt5\venv\Scripts\python.exe D:/pycharm/pyqt5/TEST01.py
1
2
3
4
Process finished with exit code 0
```

解释：@def 装饰器语法糖==装饰器（被装饰函数），装饰器的作用：闭包间的传参，抽象功能，增加外置功能