

Quiz 1 – 45 minutes**Bagian A. [Nilai Total: 50]**

1. [10] Write a function that requires a positive integer as argument and returns the sum of its individual digits. Use a while loop and the operator % and // to extract the digits one by one. For example: take 513 as argument, 513 % 10 gives **3** and 513 // 10 gives 51; next 51 % 10 gives **1** and 51 // 10 gives 5; finally 5 % 10 gives **5** and 5 // 10 gives 0. So the sum = 3 + 1 + 5 = 9.

```
>>> sumDigits(8)          # 8 = 8
8
>>> sumDigits(513)        # 3 + 1 + 5 = 9
9
```

Answer:

```
..... sumDigits(n):
    result = 0          #accumulates the sum of digits
    num = n
    while .....:
        result = .....
        num = .....
    return result
```

2. [10] What is the output printed on screen by this program?

```
a, b = 9, 5
a = b
b = a
print(a, b)          # prints .....

k = 1
while k <= 100:
    k = k*5
print('k =', k)      # prints .....
```

3. [10] What is the output printed on screen by this program?

```
lst = ['b','e','a','u','t','y']

length = len(lst)

for k in range(length):
    lst[k] = lst[length-k-1]

print(lst)           # prints .....
```

4. [10] The following code fragment is intended to keep prompting until the user enters a positive integer which is greater than 1 and less than 1000. But there are two bugs. Find the bugs and correct them.

```
valid = False
while not valid:
    try:
        num = int(input("Enter an int i, 1 < i < 1000: "))
        if 1 < num or num < 1000:
            valid == True
        else:
            print("Input out of range. Please try again.")
    except ValueError:
        print("Not an integer. Please try again.")
```

Answer:

5. [10] Find the output printed by each **print** statement in the following IDLE session.

>>> st = "James" + '007'	>>> print(25*2)
>>> st2 = st[::-1]
>>> print(st2)	>>> print('25'*2)
.....
>>> print(st)	>>> print(27%12)
.....
>>> print(st[2])	>>> print(12%27)
.....
>>> print(st[:2])	>>> lst = [1,3,2]
.....	>>> lst2 = lst.sort()
>>> print(st[5:8])	>>> print(lst2)
.....

Bagian B. [Nilai Total: 50]***Pilih (Silang) satu jawaban yang benar.***

1. The value of the expression `ord('2')` is
A) 2 B) 12 C) 32 D) 50
2. 10 bits can be used to represent ____ distinct items or values.
A) 10 B) 20 C) 1000 D) 1024
3. When executing a program, the CPU reads each program instruction from
A) secondary memory B) cache C) flashdisk D) main memory
4. Which of the following is a relational operator?

A) = B) % C) // D) >=
5. What does it mean if the following test is true: `var1 == var2`?
A) var1 and var2 refer to the same object B) var1 becomes var2
C) var2 becomes var1 D) var1 and var2 refer to the same content
6. The following code fragment:


```
param = 3
outstr = "I need to read {} books".format(param)
print(outstr)
```


will print:
A) I need to read books B) I need to read param books
C) I need to read {3} books D) I need to read 3 books
7. Which of the following expressions (conditions) determines whether a person is ineligible (not eligible) for a discount, assuming that a person is eligible for a discount if he or she is younger than 17 and has income less than 300 dollars?
A) `age >= 17 and income >= 300` B) `age <= 17 and income > 300`
C) `age < 17 or income > 300` D) `age >= 17 or income >= 300`
8. Consider the following code fragment:

```
c1 = [2,3,4]
c2 = [2,3,4]
condition = (c1 is c2)
```


What is the value of condition?
A) True B) The code has a syntax error. C) 234 D) False
9. What output does this while loop generate?

```
j = 5
while (j > 0):
    print(j, end = ", ")
```


A) No output is generated. B) 5, 4, 3, 2, 1,
C) 5, 4, 3, 2, 1, 0, D) The output is infinite: 5, 5, 5, ...
10. Which for loop is equivalent to the given while loop?

```
i = 0
while i < 100:
    print(i)
    i = i + 1
```


A) `for i in range(100): print(i+1)` B) `for i in range(101): print(i)`
C) `for i in range(1,101): print(i+1)` D) `for i in range(100): print(i)`