**Python Quiz**

1. Which type of Python is?

1. Compiler
2. Interpreter
3. Programming
4. Script

2. What is the result of the expression 2 \*\* 3?

1. 6
2. 8
3. 9
4. 5

3. Which symbol is used to start a comment in Python?

1. // This is a comment
2. % This is a comment
3. # This is a comment
4. /\* This is a comment \*/

4. What is output of the following code?

x = 29%5

if x >= 5:

print("Pass")

else:

print("Fail")

1. Pass
2. Fail
3. “Pass”
4. “Fail”

5. What is output of the following code?

a = 0

b = 1

if a>=0 and b>=1:

    print("2")

elif a and b:

    print("1")

else:

    print("0")

1. 0
2. 1
3. 2
4. Error Compiling

6. What is output of the following code?

x = True

y = 10

z = 3

if x:

    if (y%z==0):

        print(y%z)

        else:

            print(int(y/z))

    else:

        print(None)

1. None
2. 3
3. 4
4. Error Compiling

7. What will the following code output?

i = 1

while i <= 3:

print(i)

i += 1

1. 1 2 3
2. 1 2
3. 1 2 3 4
4. Infinite loop

8. What will the following code output?

x = 3

y = 5

while x > 0:

while y > 3:

print(f"x: {x}, y: {y}")

y -= 1

x -= 1

y = 5

1. x: 3, y: 5

x: 3, y: 4

x: 2, y: 5

x: 2, y: 4

x: 1, y: 5

x: 1, y: 4

1. x: 3, y: 5

x: 3, y: 4

x: 2, y: 4

1. Infinite loop
2. Error Compiling

9. What will the following code output?

a = 1

b = 2

count = 0

while a < 5 or b > 0:

if a % 2 == 0:

b -= 1

else:

a += 1

count += 1

if count > 10: # Safety condition to avoid infinite loop

break

print(f"a: {a}, b: {b}, count: {count}")

1. a: 5, b: 0, count: 11
2. a: 4, b: -1, count: 11
3. a: 2, b: -8, count: 11
4. Infinite loop

10. What will the following code output?

nums = [3, 6, 9, 12]

i = 0

while i < len(nums):

if nums[i] % 2 == 0:

nums[i] //= 2

else:

nums[i] += 1

i += 1

print(nums)

1. [4, 3, 10, 6]
2. [4, 3, 6, 10]
3. [4, 3, 10, 12]
4. [4, 3, 12, 16]

11. What will the following code output?

for i in range(1, 4):

for j in range(i):

print(f"i: {i}, j: {j}")

1. i: 1, j: 0

i: 2, j: 0

i: 2, j: 1

i: 3, j: 0

i: 3, j: 1

i: 3, j: 2

1. i: 1, j: 1

i: 2, j: 1

i: 3, j: 3

1. i: 1, j: 0

i: 2, j: 1

i: 3, j: 2

1. Error Compiling

12. What will the following code output?

A = [[1, 2, 3], [4, 5, 6], [7, 8, 9]]

R = [sum([x for x in row if x % 2 == 0]) for row in A]

print(R)

1. [2, 8, 10]
2. [2, 10, 8]
3. [2, 10, 12]
4. [4, 5, 6]

13. What will the following code output?

x = 10

while x > 0:

x -= 1

    if x == 7:

        break

    print(x)

1. 10

9

8

7

1. 9

8

7

1. 9

8

1. 10

9

8

14. What will the following code output?

for i in range(4):

if i == 2:

continue

print(i)

1. 0

1

1. 0

1

3

1. 0

1

2

3

1. 0

1

2

15. What is output of the following code?

def fun(a, b=1):

return a \* b

print(fun(3, 2))

1. 3
2. 6
3. 9
4. Error Compiling

16. What is output of the following code?

def fun(n):

if n == 0:

return 1

elif n == 1:

return 1

else:

return fun(n-2)+fun(n-1)

print(fun(5))

1. 7
2. 8
3. 10
4. 13

17. What is output of the following code?

def output():

a = 10

    def input():

        a += 5

        return a

return input()

print(output())

1. 5
2. 10
3. 15
4. Error Compiling

18. What is the result of the following command: print(len("HUST"))?

1. 4
2. 5
3. 6
4. 7

19. What is output of the following code?

text = "DS&AI-SoICT-HUST"

print(text[-7:-4])

1. S-I
2. CT-
3. S-
4. CT

20. What is output of the following code?

Scho = "   SoICT   "

Clas = "DSAI"

Cor1 = Scho.lstrip().replace("SoICT", "HUST").lower()

Cor2 = Scho.rstrip().replace("SoICT", "HUST").lower()

print(Clas + " " + Cor1)

print(Clas + " " + Cor2)

1. DSAI hust

DSAI hust

1. DSAI hust

DSAI hust

1. DSAI hust

DSAI hust

1. DSAI hust

DSAI hust

1. DSAI soict

DSAI soict

21. What is the result of list(range(5))?

1. [0, 1, 2, 3, 4]
2. [1, 2, 3, 4, 5]
3. [0, 1, 2, 3, 4, 5]
4. [1, 2, 3, 4]

22. What is output of the following code?

lst = [1, 2, 3]

lst.insert(2, 10)

lst.append(4)

lst.remove(1)

lst.sort(reverse=True)

print(lst)

1. [2, 3, 4, 10]
2. [10, 4, 3, 2]
3. [1, 2, 3, 10]
4. [10, 3, 2, 1]

23. What is output of the following code?

set1 = {1, 2, 3}

set2 = {3, 4, 5}

print(set1 | set2)

1. {1, 2, 3, 3, 4, 5}
2. {1, 2, 4, 5}
3. {1, 2, 3, 4, 5}
4. {3}
5. Error Compiling

24. What is output of the following code?

set1 = {1, 2, 3, 4}

set2 = {3, 4, 5, 6}

result = set1 + set2

print(result)

1. {1, 2, 3, 4, 5, 6}
2. {1, 2, 5, 6}
3. {3, 4}
4. Compiling Error

25. What is output of the following code?

set1 = {1, 2, 3, 4, 5, 6}

result = {x\*\*2 for x in set1 if x % 2 == 0}

print(result)

1. {1, 9, 25}
2. {4, 16, 36}
3. {1, 4, 16, 36}
4. Compiling Error

26. What is output of the following code?

my\_dict = {"name": "Thieu", "age": 48}

my\_dict["age"] = 49

my\_dict["city"] = "Hanoi"

print(my\_dict)

1. {'name': 'Thieu', 'age': 48, 'city': 'Hanoi'}
2. {'name': 'Thieu', 'age': 49, 'city': 'Hanoi'}
3. {'name': 'Thieu', 'age': 48}
4. {'name': 'Thieu', 'age': 49}
5. Compiling Error

27. What is output of the following code?

my\_dict = {"a": 1, "b": 2, "c": 3, "d": 4}

result = {key: value \* 2 for key, value in my\_dict.items() if value % 2 == 0}

print(result)

1. {"b": 4, "d": 8}
2. {"b": 2, "d": 4}
3. {"a": 1, "c": 3}
4. {"a": 2, "c": 6}

28. What is output of the following code?

my\_dict = {

"team1": {"name": "Team A", "members": ["Alice", "Bob"]},

    "team2": {"name": "Team B", "members": ["Charlie", "David"]},

    "team3": {"name": "Team C", "members": ["Eve", "Frank"]}

}

result = [team["members"][1] for team in my\_dict.values() if "Team" in team["name"]]

print(result)

1. ["Bob", "David", "Frank"]
2. ['Alice', 'Charlie', 'Eve']
3. [“Team A”,”Team B”,”Team C”]
4. Compiling Error

29. Which data type in Python is immutable?

1. list
2. dict
3. tuple
4. set

30. What is output of the following code?

my\_tuple = (1, [2, 3], 4)

my\_tuple[1][0] = 10

print(my\_tuple)

1. (1, [10, 3], 4)
2. (1, [2, 3], 4)
3. (1, [2, 10], 4)
4. Compiling Error

31. What is output of the following code?

def fun(a, b):

    return a-b, a + b, a \* b

result = fun(2,3)

x,y,z = result

print(x,y,zs)

1. (-1,5,6)
2. -1,5,6s
3. -1 5 6
4. Compiling Error

32. What is output of the following code?

import math as ham\_toan

print(ham\_toan.sqrt(4))

1. 2.0
2. 2
3. 16
4. 16.0
5. Compiling Error

33. What is output of the following code?

import math as ham\_toan

print(ham\_toan.ceil(10/3)+ham\_toan.ceil(20/3))

1. 9
2. 10
3. 11
4. Compiling Error

34. What will the following code do?

file = open("example.txt", "r")

content = file.read()

print(content)

file.close()

1. Read the file and print its contents
2. Create a new file named "example.txt"
3. Throw an error if the file does not exist
4. Both a and c

35. Given that the file HUST.txt consists of following line:

HUST

SoICT

DSAI

What will the following code ouput?

with open("HUST.txt", "r") as file:

lines = [line.strip() for line in file]

print(lines)

1. ['HUST', 'SoICT', 'DSAI']
2. ['HUST'

'SoICT'

'DSAI']

1. [HUST,SoITC,DSAI]
2. Compiling Error

36. What will the following code output?

class Dog:

    def \_\_init\_\_(self, name = “Cun”):

        self.name = name

dog = Dog("Mic")

print(dog.name)

1. Cun
2. Mic
3. CunMic
4. Compiling Error

37. What will the following code output?

class Dog:

    def speak(self):

        return "I am a dog"

class Woof(Dog):

    def speak(self):

        return "I am a woof"

Cho = Woof()

print(Cho.speak())

1. I am a dog
2. I am a woof
3. I am a dog

I am a woof

1. Compiling Error

38. Which of the following is NOT a basic principle of OOP?

1. Encapsulation
2. Inheritance
3. Polymorphism
4. Concatenation

39. Which of the following is NOT a basic principle of OOP?

1. Encapsulation
2. Inheritance
3. Polymorphism
4. Concatenation

40. What is the output of the following code?

for i in range(2):

for j in range(2):

print(f"{i}-{j}")

1. 0-0

0-1

1-0

1-1

1. 0-1

1-0

1-1

1. 0 1
2. Error

Middle Exam: IT1110E – Introduction to Programming – 20241

1. Which of the following commands is used to print to the screen?

1. echo
2. printf
3. print
4. display

2. What is the result of the expression 20 % 3?

1. 2
2. 6
3. 6.666667
4. 60

3. Which of the following is a multi-line comment in Python?

1. ''' This is a multi-line comment '''
2. "This is a multi-line comment"
3. /\* This is a multi-line comment \*/
4. // This is a multi-line comment

4. What is output of the following code?

x = 29/5

if x >= 5:

print("Pass")

else:

print("Fail")

1. Pass
2. Fail
3. “Pass”
4. “Fail”

5. What is output of the following code?

a = 0

b = 1

if a and b:

    print("2")

elif a or b:

    print("1")

else:

    print("0")

1. 0
2. 1
3. 2
4. Error Compiling

6. What is output of the following code?

x = 1

y = 20

z = 3

if x:

    if (y%z==0):

        print(y%z)

        else:

            print(int(y/z))

    else:

        print(None)

1. None
2. 2
3. 6
4. Error Compiling

7. What will the following code output?

x = 5

while x > 0:

print(x, end=” ”)

x -= 1

1. 5 4 3 2 1
2. 5 4 3 2 1 0
3. 4 3 2 1
4. 4 3 2 1 0

8. What will the following code output?

i = 1

j = 10

while i < 5 and j > 6:

print(f"i: {i}, j: {j}")

i += 1

j -= 2

1. i: 1, j: 10

i: 2, j: 8

i: 3, j: 6

1. i: 1, j: 10

i: 2, j: 8

1. Infinite loop
2. Error Compiling

9. What will the following code output?

a = 1

b = 2

count = 0

while a < 5 or b > 0:

if a % 2 == 0:

b -= 1

else:

a += 1

count += 1

if count > 10: # Safety condition to avoid infinite loop

break

print(f"a: {a}, b: {b}, count: {count}")

1. a: 5, b: 0, count: 11
2. a: 2, b: -8, count: 11
3. a: 4, b: -1, count: 11
4. Infinite loop

10. What will the following code output?

nums = [3, 6, 9, 12]

i = 0

while i < len(nums):

if nums[i] % 2 == 0:

nums[i] //= 2

else:

nums[i] += 1

i += 1

print(nums)

1. [3, 10, 6, 12]
2. [4, 3, 10, 6]
3. [3, 10, 12, 16]
4. [3, 12, 10, 16]

11. What will the following code output?

for i in range(1, 4):

for j in range(i):

print(f"{i},{j}")

1. 1, 1

2, 1

3, 3

1. 1,0

2,0

2,1

3,0

3,1

3,2

1. 1, 0

2, 1

3, 2

1. Error Compiling

12. What will the following code output?

A = [[1, 2, 3], [4, 5, 6], [7, 8, 9]]

R = [sum([x for x in row if x % 2 == 1]) for row in A]

print(R)

1. [2, 8, 10]
2. [2, 10, 12]
3. [4, 5, 16]
4. Compiling Error

13. What will the following code output?

x = 10

while x > 0:

x -= 1

print(x)

    if x == 7:

        break

1. 10

9

8

7

1. 9

8

7

1. 9

8

1. 10

9

8

14. What will the following code output?

for i in range(4):

print(i)

if i == 2:

continue

1. 0

1

1. 0

1

3

1. 0

1

2

3

1. 0

1

2

15. What is output of the following code?

def fun(a, b=1):

return a \*\* b

print(fun(3, 2))

1. 3
2. 6
3. 9
4. Error Compiling

16. What is output of the following code?

def fun(n):

if n == 0:

return 1

elif n == 1:

return 2

else:

return fun(n-2)+fun(n-1)

print(fun(5))

1. 7
2. 8
3. 10
4. 13

17. Which keyword is used to inherit a class in Python?

1. extends
2. inherit
3. superclass
4. class

18. What is output of the following code?

def output():

a = 5

    def input():

        a += 10

        return a

return input()

print(output())

1. 5
2. 10
3. 15
4. Error Compiling

19. What is output of the following code?

text = "DS&AI-SoICT-HUST"

print(text[-7:-4])

1. S-I
2. CT-
3. S-
4. CT

20. What is output of the following code?

text = "DS&AI-SoICT-HUST"

print(text[-7:-5])

1. S-I
2. CT-
3. S-
4. CT

21. What is output of the following code?

Scho = "   SoICT   "

Clas = "DSAI"

Cor1 = Scho.rstrip().replace("SoICT", "HUST").lower()

Cor2 = Scho.lstrip().replace("SoICT", "HUST").lower()

print(Clas + " " + Cor1)

print(Clas + " " + Cor2)

1. DSAI hust

DSAI hust

1. DSAI hust

DSAI hust

1. DSAI hust

DSAI hust

1. DSAI hust

DSAI hust

1. DSAI soict

DSAI soict

22. Which python command will print the result: [0, 1, 2, 3, 4, 5]?

1. print(list(range(5)))
2. print(list(range(6)))
3. print(list(range(0:5)))
4. print(list(range(0:6)))

23. What is output of the following code?

numbers = [1, 2, 3, 4, 5]

print([x\*\*2 for x in numbers if x % 2 == 1])

1. [2,4]
2. [1,3,5]
3. [4,16]
4. [1,9,25]
5. [35]

24. What is output of the following code?

lst = [1, 2, 3]

lst.insert(2, 10)

lst.append(4)

lst.remove(1)

lst.sort(reverse=True)

print(lst)

1. [2, 3, 4, 10]
2. [10, 4, 3, 2]
3. [1, 2, 3, 10]
4. [10, 3, 2, 1]

25. What is output of the following code?

set1 = {1, 2, 3}

set2 = {3, 4, 5}

print(set1 & set2)

1. {1, 2, 3, 3, 4, 5}
2. {1, 2, 4, 5}
3. {1, 2, 3, 4, 5}
4. {3}
5. Error Compiling