Midterm Exam_Version#1

Student Name: _____

1) How many times will 'Hello World' be printed in the following program?

```
counter = 3
while counter > 7:
    print('Hello World')
    counter += 1
```

a) 4
b) 3
c) 5
d) Infinite loop
e) 0

2) What is the value of `result` after executing this code?

```
result = 6

for m in range(3):
    for n in range(1, 5, 2):
        if result % 3 == 0:
            result += 2
```

a) 8
b) 10
c) 12
d) 14
e) 16

3) What will the following code display:

```
def calculate(a, b, c):
    return a + b + 10

result = calculate(4, 6)
print(result)
```

a) 20
b) 10
c) Error
d) No answer
e) 30

4) What will the following code display:

```
def get_num(n):
    return n % 2 == 0

def check_number(num):
    if get_num(num):
        return "Happy"
    else:
        return "Joy"

print(check_number(7))
```

a) Error
b) Happy
c) Joy
d) True
e) False

5) What will the following code display:

```
def main():
    num1 = 23
    num3 = get_num()
    print(num1 + num2 + num3)

def get_num():
    num1 = 10
    num2 = 23
    return num1 + num2

main()
```

a) 33
b) 56
c) Error
d) 46
e) No answer

6) What will the following code display:

```
def calculate_product(x, y=5, z=1):
    return x * y * z
result = calculate_product(2, z=3)
print(result)
```

a) Error
b) 30
c) 10
d) 6
e) 2

7) What will the following code display:

```
count = 3
result = 0

while count > 3:
    result += count
    count -= 1

print(result)
```

a) 3
b) 6
c) 0
d) 9
e) 5

8) What will the following code display:

```
def main():
    weight = 65
    print('The total weight is', calculate_weight(3))

def calculate_weight(factor):
    result = factor*weight
    return (result)

main()
```

a) The total weight is 65
b) Error
c) The total weight is 0
d) The total weight is 3
e) The total weight is 195

9) What will the following code display:

```
def my_function(name1, name2, name3):
    print(name2, name1, 'John')

my_function('Sara', 'Jack', 'Suzan')
```

a) Sara Jack John
b) Jack Sara John
c) Suzan Sara John
d) Jack Suzan John
e) Jack Sara Suzan

10) What will be the output of the code when x = 70?

```
x = 70
if x > 60:
    print('High')

if x < 80:
    print('Low')
else:
    print('Medium')
```

a) High
b) Low
c) Medium
d) Error
e) High and Medium

11) Consider the following code, what will be the value of **final_result**?

```
result = 15
x = 8
y = 6

def calculate_total(x, y):
    global result
    result = x + y
    return result

final_result = calculate_total(x, y)
print(final_result)
```

a) 15
b) 23
c) 14
d) None
e) 21

12) What will the following code display:

```
def calculate_result(a, b, c):
    result = (a - b) + c
    print(result)

x = 10
y = 20
z = 30
calculate_result(z, x, y)
```

a) 10
b) 20
c) 30
d) 40
e) 50

13) Consider the following code, what should be the value of x to trigger the output **'Section C**'?

```
x = ?
if x > 50:
    if x > 75:
        print('Section A')
    elif x > 60:
        print('Section B')
    else:
        print('Section C')
else:
    print('Section D')
```

a) x= 80
b) x= 65
c) x= 55
d) x= 40
e) x= 30

14) What is the output of following lines of code?

```
def show_value(b, a=30):
    print(f"a: {a}, b: {b}")

show_value(45)
```

a) a: 30, b: 45
b) a: 45, b: 30
c) b: 30, a: 45
d) Error
e) a: 45, b: 45

15) What is the output of following lines of code?

```
def evaluate_values(a, b):
    if a > -b:
        flag = True
    else:
        flag = False
    if not flag:
        print(a + b)
    else:
        print(a - b)

evaluate_values(-10, 30)
```

a) 20
b) 40
c) -20
d) -40
e) Error

16) What is the value of y after executing the following code?

```
z = 3
w = 7
y = 1

if z > 2:
    if w < 10:
        y = y + 4
    elif z < 5:
        y = y + 3
    else:
        y = y + 2
else:
    y = y + 1

print(y)
```

a) 2
b) 4
c) 5
d) 6
e) 7

17) What will be the output?

```
infile =open("greeting.txt", "w")
infile.write("Good morning!\n")
infile.write("Good afternoon!\n")
infile.write("Good evening!")

outfile.open("greeting.txt", "r")
content = outfile.read()

print(content)
```

a) Good evening!

b) Good morning!

c) Good afternoon!\n

d) Good morning!
Good afternoon!
Good evening!

e) Good morning!\n
Good afternoon!\n
Good evening!

18) What will be the output?

```
def display_info(name, age, city):
  name = 'Sara'
  user_age = age + 3
  return city, name, user_age

res1,res2,res3 = display_info("Alice", city="Dallas", age=30)
print(res2,res1)
```

a) Sara Dallas
b) Alice Dallas
c) Dallas Sara
d) 33 Alice
e) 33 Sara

19) What will be the output?

```
if 'Cars' > 'Cat':
    print('Hello')
elif 'Fat' < 'Fall':
    print('Morning')
else:
    print('Bye')
```

a) Hello
b) Morning
c) Bye
d) Error
e) False

20) What is the output of this code?

```
for i in range(8, 3, -2):
    print(i)
    if i == 4:
        break
```

a) Error
b) 8 6 4
c) 8 6
d) 8 6 4 2
e) 8 4 2

21) What will the following code display:

```
def main():
    amount = 50
    if not check_num(amount):
        return "Short"
    else:
        return "Tall"

def check_num(value):
    if value > 60:
        return not False
    else:
        return not True


main()
```

a) Tall
b) False
c) True
d) Short
e) Error

22) If 'log.txt' doesn't exist, what gets printed?

```
try:
    infile =open('log.txt', 'r'):
    content = infile.read()
    print("File opened")


except FileNotFoundError:
    print("File not found")


finally:
    print("Finished checking file")
```

a) File not found

b) Finished checking file

c) File not found
   Finished checking file

d) File opened
   File not found
   Finished checking file

e) File opened

23) Write a program that asks the user to enter a temperature in Celsius, and then uses a **function** that accepts the temperature as an argument to convert it to Fahrenheit. The function should return the converted value. The conversion formula is as follows:
Fahrenheit = (Celsius × 9/5) + 32

24) Write a program to get two inputs from the user. If both numbers are even, display the following message: "both input numbers are even." If only one of the numbers is even, then display the message: "only one input number is even." Otherwise, display: "none of the input values is even."

25) Write a program that asks the user to enter a positive integer. The program should then calculate and display the sum of all numbers from 2 up to (and including) that integer.