Q1 Notes

1 Point

Academic Honesty

It is a violation of the Academic Integrity Code to look at any reference material other than your textbook and lecture notes, or to give inappropriate help to someone or to receive unauthorized aid by someone in person or electronically via messaging apps such as WhatsApp. Academic Integrity is expected of all students of Hacettepe University at all times, whether in the presence or absence of members of the faculty. Do NOT sign nor take this exam if you do not agree with the honor code.

Understanding this, I declare I shall not give, use or receive unauthorized aid in this examination.

Signature (Specify your name and surname as your signature)

Mehmet Taha USTA MTUSTA

Notes about the exam

- If you think there is an error in the questions, please write `Error` in the provided space for the answer.
- While writing a list in the provided space, you should not use white space between items. A proper answer should be like this: `[1,2,3]` If you do not obey this specification, you won't have full credits.

Q2

10 Points

```
1 def star(wars):
2     hansolo = lambda: wars + 2
3     while wars * hansolo() < 4000:
4         wars = hansolo() + 5
5         if wars > 100:
6             return hansolo()
7     return wars
8
9 luke = star(50)
```

Answer the following questions considering the Python code given above.

Q2.1

3 Points

What will be the final value of **`luke`** after executing this code?

64

Q2.2

4 Points

How many call frames (including the global frame) have been generated during the program execution?

5

Q2.3

3 Points

What will be the final value of **`luke`** if line 2 is changed as **`hansolo = lambda: wars * 1.2`**

65.0

Q3

10 Points

```
1  def star(trek):
2      riker = 6
3      borg = trek(spock, riker) - 5
4      return borg
5
6  spock, riker = 3, 8
7
8  def borg(riker, kirk):
9      riker = riker*kirk - spock
10     return riker
11
12 sulu = star(borg)
```

Answer the following questions considering the Python code given above.

Q3.1

3 Points

What will be the final value of **`sulu`** after executing this code?

10

Q3.2

4 Points

Considering the line numbers included in the figure, please complete the order in which these lines of code are processed in Python? **While answering this question please provide a list of numbers separated by a comma, e.g. 1,2,3,4**

1,6,8,12,1,2,3,8,9,10,3,4,12

Q3.3

3 Points

What will be the final value of **`riker`** if a new line that consists of **`global riker`** is included between line 1 and line 2?

6

Q4

13 Points

```
def fun(rick, galaxy, universe):
    f1, f2 = False, False
    x, y = None, None
    while rick != 0:
        rick, morty = rick // 10, rick % 10
        if morty % 2 == 0:
            if not f1:
                x = morty
                f1 = True
            else:
                x = galaxy(x, morty)
        else:
            if not f2:
                y = morty
                f2 = True
            else:
                y = universe(y, morty)
    return x * y
```

Consider the function **`fun`** defined above. For each of the expressions given below, please write the output displayed by the Python interpreter when the expression is evaluated.

Q4.1

4 Points

```
fun(1234, lambda x,y: x+y, lambda x,y: x*y)
```

18

Q4.2

3 Points

```
fun(11111111111112, lambda x,y: x+y, lambda x,y: x*y)
```

2

Q4.3

3 Points

```
fun(11111111111112, lambda x,y: x+y, lambda x,y: x+y)
```

26

Q4.4

3 Points

```
fun(12345, lambda x,y: x+y, lambda x,y: x*y)
```

90

Q5

8 Points

```
1  def f3():
2      print("BBM101")
3      print("BBM101")
4      print("BBM101")
5
6  def f2():
7      f1()
8      f3()
9      print("BBM101")
10     f1()
11
12 def f1():
13     f3()
14     print("BBM101")
15     f3()
16
17 f2()
```

Consider that the Python code given above has just printed the 11th "BBM101".

Q5.1

3 Points

How many times the function `f1()` called?

1

Q5.2
2 Points

How many times the function `f2()` called?

1

Q5.3
3 Points

How many times the function `f3()` called?

3

Q6 Errors
9 Points

Q6.1
3 Points

What is wrong with the following Python program:

```
1  daenerys = {1:'Daenerys Stormborn of House Targaryen',
2              2:'the First of Her Name',
3              3:'Queen of the Andals and the First Men',
4              4:'Protector of the Seven Kingdoms',
5              5:'the Mother of Dragons',
6              6:'the Khaleesi of the Great Grass Sea',
7              7:'the Unburnt',
8              8:'the Breaker of Chains'}
9
10 daenerys_fullname = ''
11 for name in daenerys:
12     daenerys_fullname = daenerys_fullname + daenerys[name+1]
13
14 print(daenerys_fullname)
```

- ○ When executed it gives a SyntaxError.
- ○ When executed it gives a TypeError.
- ○ When executed it gives a IndexError.
- ◉ When executed it gives a KeyError.
- ○ There is no error in the code.

Q6.2

3 Points

What is wrong with the following Python program:

```
1  daenerys = {1:'Daenerys Stormborn of House Targaryen',
2              2:'the First of Her Name',
3              3:'Queen of the Andals and the First Men',
4              4:'Protector of the Seven Kingdoms',
5              5:'the Mother of Dragons',
6              6:'the Khaleesi of the Great Grass Sea',
7              7:'the Unburnt',
8              8:'the Breaker of Chains'}
9
10 daenerys_fullname = []
11 for name in daenerys:
12     daenerys_fullname = daenerys_fullname + daenerys[name+1]
13
14 print(daenerys_fullname)
```

- ○ When executed it gives a SyntaxError.
- ◉ When executed it gives a TypeError.
- ○ When executed it gives a IndexError.
- ○ When executed it gives a KeyError.
- ○ There is no error in the code.

Q6.3

3 Points

What is wrong with the following Python program:

```python
daenerys = {'1':'Daenerys Stormborn of House Targaryen',
            '2':'the First of Her Name',
            '3':'Queen of the Andals and the First Men',
            '4':'Protector of the Seven Kingdoms',
            '5':'the Mother of Dragons',
            '6':'the Khaleesi of the Great Grass Sea',
            '7':'the Unburnt',
            '8':'the Breaker of Chains'}

daenerys_fullname = ''
for name in daenerys
    daenerys_fullname = daenerys_fullname + daenerys[name]

print(daenerys_fullname)
```

- ○ When executed it gives a SyntaxError.
- ○ When executed it gives a TypeError.
- ○ When executed it gives a IndexError.
- ○ When executed it gives a KeyError.
- ◉ There is no error in the code.

Midterm exam - Part 1

● GRADED

STUDENT
MEHMET TAHA USTA

TOTAL POINTS
44 / 51 pts

QUESTION 1
Notes — **1** / 1 pt

QUESTION 2
(no title) — **6** / 10 pts

2.1 (no title) — **3** / 3 pts

2.2 (no title) — **0** / 4 pts

2.3 (no title) — **3** / 3 pts

QUESTION 3

(no title) **10** / 10 pts

3.1 (no title) **3** / 3 pts

3.2 (no title) **4** / 4 pts

3.3 (no title) **3** / 3 pts

QUESTION 4

(no title) **13** / 13 pts

4.1 (no title) **4** / 4 pts

4.2 (no title) **3** / 3 pts

4.3 (no title) **3** / 3 pts

4.4 (no title) **3** / 3 pts

QUESTION 5

(no title) **8** / 8 pts

5.1 (no title) **3** / 3 pts

5.2 (no title) **2** / 2 pts

5.3 (no title) **3** / 3 pts

QUESTION 6

Errors **6** / 9 pts

6.1 (no title) **3** / 3 pts

6.2 (no title) **3** / 3 pts

6.3 (no title) **0** / 3 pts