

COMP1021 Spring 2019 Final Exam Solution

No partial marks are awarded, unless they are specifically mentioned in this marking scheme

Q1) 5 marks **False** **false** is also accepted

Q2) 5 marks: 1 mark each: **she is the fast one**

(The numbers shown in the code comment are deliberately wrong!)

Q3) 5 marks **3**

Not has a higher precedence than And which has a higher precedence than Or

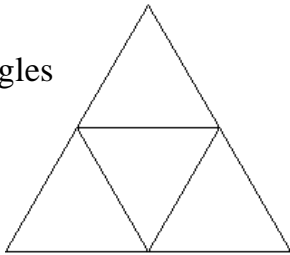
Q4) 5 marks **False** **false** is also accepted

Q5) Part A. 2.5 marks `print(thiskey)`

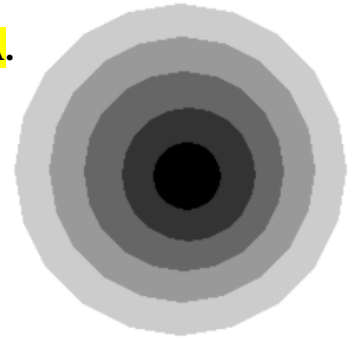
Part B. 2.5 marks `print(thisvalue[0])`

Q6) 5 marks

There are **5** triangles



Q7) 5 marks The answer is **A**.



Q8) 5 marks `for i in range(1, 23):`

Q9) 5 marks The program prints 1 2 3 4 5 4 5 4 5 2 3 4 5 4 5 4 5 which is **17** digits

Q10) 5 marks The password is **useful**

Q11) 5 marks in total:

```
def pretty(quantity, length, angle):
```

```
    if length >= 25:
```

```
        side = 0
```

```
        while side < quantity:
```

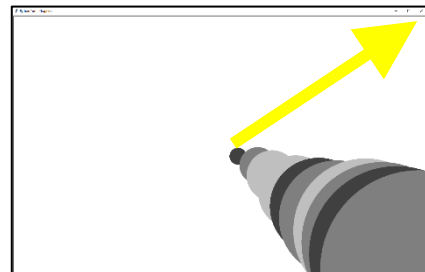
```
            turtle.forward(length)
```

```
            pretty( quantity, length/4, angle)
```

```
            turtle.right(angle)
```

```
            side = side + 1
```

Q12) 5 marks



Q13) `myheart = Heart(0, 0, 3, "red")`

`myheart.pump()`

4 marks

3 marks

2.5 marks

2.5 marks

Q14) 9 marks in total:

```
def play_alarm_sound():  
    global day    3 marks  
    print("I am about to play the alarm sound")  
    playsound.play("alarm_sound.wav")  
    day = 1 + day    3 marks  
    if day <= 365-148: 3 marks  
        turtle.ontimer(play_alarm_sound, 1000 * 60 * 60 * 24)
```

Q15) 9 marks in total: Part A) 3 marks. **25**

Part B) 3 marks. **theFilename="Image-" + str(a) + "-" + str(b) + ".gif"**

Part C) 3 marks.

K I D

Q16) 15 marks in total: There are 1.5 marks for each correct answer.

First page

midterm_file = open("marks.txt", " **r** ") *No marks if the student writes speech marks* **Also OK:** " **rt** "

for **one_line** in midterm_file:

one_line = one_line.rstrip() # Remove the '\n' on the right

columns = one_line.split(**"\t"**)

this_name = columns[0]

this_mark = **int(columns[1])**

bin_number_to_increase = this_mark // **10**

histogram[bin_number_to_increase]=histogram[bin_number_to_increase]+ \

1

Second page

turtle.forward(**width**)

turtle.forward(**height**)

Third page

for this_bin_number in **range(len(histogram))**):

draw_rectangle(70, histogram[this_bin_number]*10)

turtle.write(str(this_bin_number*10), font=("Arial", 25, "bold"))

turtle.up()

turtle.forward(**70**)

turtle.down()