**Homework 2: Loops**

1. A computer game allows a player to repeat a level until they run out of lives.

Which **two** of the following loops would work correctly? [2]

⬨ while lives < 0:

⬧ while lives > 0:

⬨ while lives == 0:

⬧ while lives != 0:

2. Examine the following code:

total = 0

next = 1

while total < 4:

total = total + next

next = next \* 2

(a) Complete the value of each variable after the **first** pass through the loop [2]

total: 1

next: 2

(b) Complete the value of each variable after the **last** pass through the loop [2]

total: 7

next: 8

3. Examine the following code:

choice = input(“Guess the animal: ”)

while choice != “rhino”:

print(“Incorrect. Try again.”)

When the user tries to test this program with an incorrect answer it just repeats “Incorrect. Try again” forever.

Rewrite the program below so that it works correctly. [2]

choice = input(“Guess the animal: ”)

while choice != “rhino”:

print(“Incorrect. Try again.”)

**choice = input(“Guess the animal: ”)**

***One*** *mark for identifying that the question needs to be asked again*

***One*** *mark for correctly indenting it inside the loop*

4. State when a programmer should use a **for** loop instead of a **while** loop [1]

When the number of times to repeat is known

5. Examine the following code:

for counter in range(12):  
 print(counter)

State the **first** and the **last** values that will be printed. [2]

0, 11

6. Examine the following code:

for counter in range(20,25):  
 print(counter)

State the **first** and the **last** values that will be printed [2]

20, 24

7. A newsagent wants a program to add up the total number of papers delivered in a period of one week (7 days).

Fill in the **two** incomplete lines of code. [2]

total = 0

for counter in range\_\_\_\_\_\_\_\_\_\_

papers = int(input(“How many papers delivered today? ”))

total = \_\_\_\_\_\_\_\_\_\_

print(“Total papers delivered =”, total)

total = 0  
for counter in range(**7): *(accept range(0,7))***  
 papers = int(input(“How many papers delivered today? ”))  
 total = **total + papers**  
print(“Total papers delivered =”, total)

[Total 15 marks]