**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: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

next: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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

total: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

next: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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]

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

5. Examine the following code:

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

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

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]

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 15 marks]