Marking Scheme for COMP Prelim Practical Exam P2 2018

Task1 (10)	Task2 (10)	Task3 (10)	Task4 (20)	Total (50)

Name : _____   Class: _____

Task 1 – Simple program / String Manipulation	
No	Description
1.	=COUNTA(A4:A24) OR COUNT(B4:B24)
2.	=AVERAGE(B4:B24)
3.	=MAX(B4:B24)-MIN(B4:B24)
4.	In the top formula, **1** mark for the calculation, **1** mark for rounding and **1** mark for the rest =ROUND(D4 / (POWER(C4,2)),1) =ROUND(D5 / (POWER(C5,2)),1) =ROUND(D6 / (POWER(C6,2)),1) ….. =ROUND(D23 / (POWER(C23,2)),1) =ROUND(D24 / (POWER(C24,2)),1)
5.	**1** mark for working top formula, **1** mark for the rest =VLOOKUP(E4,$F$32:$G$35,2,TRUE) =VLOOKUP(E5,$F$32:$G$35,2,TRUE) =VLOOKUP(E6,$G$6:$H$14,2,TRUE) … = VLOOKUP(E23,$F$32:$G$35,2,TRUE) = VLOOKUP(E24,$F$32:$G$35,2,TRUE)
6.	**1** mark for working top formula, **1** mark for the conditional formatting =IF(F4="Healthy weight","YES", "NO") OR =IF(F4=$G$33,"YES", "NO") OR using =IF(AND(E4>=18.5,E4<23) , "YES", "NO")

Task 2 – Modify/Edit existing program		
7.	a)	`ppl = 50`
	b)	`count = 0`

		`if age < 18:`
		`    count = count + 1`
		`print("Number of people below 18 years old: ", count)`

	c	`while age < 15 or age > 65:` `  age = int(input("Enter age between 15 to 65 : "))`
8.		`ppl=int(input("Enter number of people : "))`

Task 3 – Identify and correct errors in existing program

9.
```
age = 0
exp = 0
pdvl = "N"
citizen = "N"
qualify = 0      #error : missing this statement
rejected = 0

age = int(input("Please enter your age " ))
exp = int(input("Please enter years of driving experience " ))
pdvl = input("Do you hold a Private Hire Car Driver Vocational License (PDVL):
(Y/N) ")
citizen = input("Are you a Singapore Citizen (Y/N) ") #error : no cast
while age != 0:    #error : age == 0
    if age < 21 or exp < 2 or pdvl == "N" or citizen == "N": #error:exp > 2
        if age < 21: #error : age <= 21
            print("You are too young to drive")
        if exp < 2:
            print("You do not have enough driving experience")
        if pdvl == "N":
            print("You need to obtain a PDVL license first")
        if citizen == "N":  #error : incorrect else
            print("You have to be a Singapore Citizen")
        rejected += 1   #error : rejected -= 1
    else:               #error : incorrect elif
        print("You qualify to be a GRAB driver ")
        qualify = qualify + 1
    age = int(input("Please enter your age " ))
    exp = int(input("Please enter years of driving experience " ))
    pdvl = input("Do you hold a Private Hire Car Driver Vocational License
(PDVL): (Y/N) ")
    citizen = input("Are you a Singapore Citizen (Y/N) ") #error:missing line
print("Number of people rejected ", rejected) #error: incorrect variable qualify
print("Number of people qualified ", qualify)
```

Task 4 – Develop/Write a program

10.
```
total=0
threedays_total = [0, 0, 0]
for day in range(3):

    daytotal = 0.0
    for loc in range(4):
        temp=float(input("Enter temp : "))
        while temp<0 or temp>50.0:
            print("Please enter temperature bet 0.0 and 50.0 only")
            temp=float(input("Enter temp : "))
        daytotal = daytotal + temp

    threedays_total[day] = threedays_total[day] + daytotal

for day in range(3):
    avg = round(threedays_total[day]/4,1 #correct calculation
    print("Day {} \t Average Temperature {}".format(day+1, avg))

total = sum(threedays_total) #correct calculation
print("\nAverage 3-day temperature: ", round(total/4*3, 1))
```

11.	Test : four lines output (3) (-1 for each line with an error)	
	bitmap output matches stored program	
12.	Extend : correct test for temperature more than 30.0 on two occasions or more	
	correct output (-1 for each line with an error)	
13.	Extend : entry of number of locations	
	correct loop control	