**Bukit View Secondary School**

**Marking Scheme for COMPUTING PRELIM 2018 4E Paper 2**

## Task 1

Q1. B20 =SUM(B4:B18)

Q2. B21 = COUNT(B4:B18)

Q3. B22 = MAX(C4:C18) - MIN(C4:C18)

Q4. D4 = VLOOKUP(C4, $D$25:$F$29, 3, TRUE)
D5 to D18 are correct.

Q5. E4 = ROUND(ABS(FV(D4/12,C4,0,B4)),0)

E5 to E18 are correct.

Q6. F4 = IF(AND(B4>=2000, C4>12), "YES", "NO")
F5 to F18 are correct.

**Task 2**

```
drinks_category = 0
sandwiches_category = 0
cakes_category =0
items = 20   #

# items = int(input("Enter the number of items sold "))    #

for i in range (items):
    item_string = input("Enter the item code ")
    item_code = int(item_string)

    while len(item_string) !=3 or item_code<0 or item_code > 299 : #
        item_string = input("Invalid input! Enter the item code 000-299 ")
        item_code = int (item_string)                          #

    if item_code < 100:
        drinks_category = drinks_category + 1
    elif item_code < 200:
        sandwiches_category = sandwiches_category + 1
    else :
        cakes_category = cakes_category + 1

print ("The number of drinks, sandwiches and cakes sold are ",
drinks_category, sandwiches_category, cakes_category)

if drinks_category > sandwiches_category:
    if drinks_category > cakes_category:
        highest_category_name = "drinks"
        highest_category_number = drinks_category     #
elif sandwiches_category > cakes_category:
        highest_category_name = "sandwiches"
        highest_category_number = sandwiches_category #
else:
        highest_category_name = "cakes"
```

```
        highest_category_number = cakes_category     #

print ("The highest category name is ", highest_category_name, " with ",
highest_category_number, " items sold")                          #
```

**Task 3**

```
multiplier_weight = 1
total = 0

isbn = input ("Enter an ISBN-13 number with no spaces ")

check_digit = int(isbn[12])

for i in range(12):
    total = total + int(isbn[i]) * multiplier_weight

    if multiplier_weight == 1:
        multiplier_weight = 3
    else:
        multiplier_weight = 1

remainder = total % 10
if remainder == 0 :
    result = 0
else:
    result = 10 - remainder

if result == check_digit:
     print ("ISBN Number is valid")
else:
     print ("ISBN Number is invalid")
```

## Task 4

Marking Guide :

### Task 4a (Question 10 SALESMAN1.PY)

Correct input for **number_cars**

Correct **Validation Check** for car input (>= 0)

Correct Variable set up for **average_number_cars**

Correct Variable set up and initialised for **total_salesman**

Correct Variable set up and initialised for **total_week**

Correct use of **loop for 4 salesmen**

Correct use of **loop for 5 days**

Correct **calculation of average** rounded to nearest whole number

Correct **calculation of total_salesman**

Correct **calculation of total_week**

### Task 4b (Question 11 Screen Shot SALESMANRESULT bitmap file)

Test and print Screen Shot with 6 lines of output
(Note : -1 mark for each line with error)

Output matches stored program

### Task 4c (Question 12 SALESMAN2.PY)

Extend Program to identify days that have < 5 cars.

Correct test for less than 5 cars

Correct output for Day 2 and Day 4
(Note : -1 mark for each line with error)

### Task 4d (Question 13 SALESMAN3.PY)

Extend Program to work for any number of salesman.

Correct data entry of number of salesman
Correct loop control