UNITED ARAB EMIRATES
MINISTRY OF EDUCATION

الإمارات العربية المتحدة
وزارة التربية والتعليم

STUDENT SECTION					
Name				Class	
Student MOE number (SIS)		School MOE Number		STUDENT SIGNATURE	
School name					

Computer Science

Grade 10

Sample -Term 2

Date: February 2018

Time: TBC

Duration: 45 minutes

STUDENT INSTRUCTIONS –
Students must attempt **all** questions
For this examination, you must have:

1. An ink pen – blue.
2. A pencil.
3. A ruler.

TEACHER NOTES & INSTRUCTIONS

Please tick ✓ the correct answers in **RED INK** and then write the mark awarded in the marking columns. With multiple mark answers highlight where the mark is awarded by **underlining** or by using an extra tick.

FOR ADMIN ONLY	
MARKING RECORD	
Section	Section TOTALS
Section 1	
Section 2	
Section 3	
Section 4	
MARKER SIGNATURE	TOTAL MARKS
MODERATOR SIGNATURE	

SECTION 1 – Answer the questions for the below program.

```
1  from random import *
2  def power_function (num1,num2):
3      x = pow (num1,num2)
4      return x
5  print ("program to return 2 to the power 6")
6  num1 = 2
7  num2 = 6
8  result = power_function (num1,num2)
9  print ("2 is powered by 6 (2**6) which equals :", result)
```

1. Write the **line numbers** which are used for the function calls and the return statements.

   Function Call **(any one)**_____

   Function Return_____ **(2 marks)**

2. There can be **any** number of **user-defined functions** in a program. Choose and circle the correct answer.

   A. True b. False **(2 marks)**

3. The keyword used for defining a function is **def**. Choose and circle the correct answer.

   A. True b. False **(2 marks)**

4. The _____ is the **built-in function** used in the code. **(2 marks)**

5. The **data type** for the variables num1 and num2 is_____. Choose and circle the correct answer – A, B, C or D

   A. Boolean
   B. float
   C. integer
   D. string

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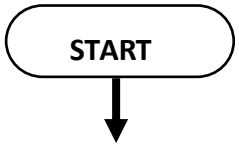
SECTION 2 – Flow Chart

Draw a flow chart that shows an algorithm for your restaurant bill discount.

- **Inputs** 
  - Food item1 and food item2**.** **(3 marks)**
- **Calculation** 
  - Find the total cost where total cost = food item1 + food item2. **(2 marks)**
- **Decision**
  - Check the total cost >= 100  **(2 marks)**
    - **Output**  **(2 marks)**
      - If "YES" then print "25% discount on the bill" and **STOP.** **(1 mark)**
      - If "No" then print "No discounts" and **STOP**.



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SECTION 3 – Code Completion

1. Complete the table below. An example is shown. **(3 marks)**

Problem description	Function name	Input	Return value or outputs
Example A function that takes the **floating**-point radius and calculates the circle area.	Circle( )	radius(float)	area(float)
A function to check if an **integer** number is positive, negative or zero			

2. Complete the table below. An example is show **(6 marks)**

Question	Conditional Statements
Example Is z less than 500?	z < 500
Is watermelonSize less than or equal to appleSize?	
	Y > Z
Is Fatima's height greater than than 1.5m and Ahmed's height less than 1m?	

3. Complete the if-else statement to check whether Mansour's bank balance is enough to buy a mobile phone**.**
If the balance is greater than 5000 then print **"Can purchase a mobile phone"**, otherwise print **"Cannot purchase a mobile phone"**. **(4 marks)**

```
Balance=input("Mansour's bank balance ")
Balance= int(Balance)
if (                    ):
    print("                                    ")
else:
    print("                                    ")
```

4. Use the variables speedlimit1 = 100 and speedlimit2 = 50.
   What is the Boolean (true or false) result of the compound condition statement **(speedlimit1 > 80) and (speedlimit2 < 40).** Choose and circle the correct answer.

   a. True b. False **(1 mark)**

5. **Complete the elif statement below.** Check for the temperature and print. If the **(6 marks)**
   - temperature is less or equal to 10, **print** "Freezing".
   - temperature is greater than 10 and less than 25, **print** "Warm"".
   - otherwise **print** "Hot".

```
temperature = input("Enter the temperature ")
temperature = int(temperature)
if (                    ):
    print("                    ")
elif (                          ):
    print("                    ")
else:
    print("                    ")
```

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SECTION 4 – Coding

Design a **complete** the Python program to:

Step 1: Create a **function** that will **add** two of your cards points earned (card1_points, card2_points) and **returns** the total points**.** The calculation is:

- **total_points = card1_points + card2_points** **(6 marks)**

Step 2: Check the **total_points** earned to see if you get a free ride. If the **(4 marks)**

- total_points is <= 500 then print "Sorry. No free ride"
- total_points > 500 and total point < 1000 then print "You get one free ride"
- total_points >= 1000 then print "Congrats!!! You get three free rides"

```
1  # Function returns the total of the cards points
2  def calculation(card1_point, card2_point):
3        total_points =
4        return
5  # input two cards points and call the function
6  card1_point =
7  card1_point =
8  card2_point =
9  card2_point =
11 # Call the function
12 total_points =
13 if (total_points) <= 500 :
14       print ("Sorry. No free ride")
15 elif (                                    ):
16       print("                                    ")
17 elif (                                    ):
18       print("                                    ")
19 else: print("Error. Wrong input")
```

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TOTAL

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End of Examination