deerwalk Sifal School			
FIRST TERMINAL SAMPLE QUESTION - 2083			
ROLL NO.		**GRADE**	**XII**
SUBJECT	**PYTHON PROGRAMMING**	**FULL MARKS**	**25**
DATE		**TIME**	**1 Hrs.**

Group 'A' "Answer in short" [5 * 1 = 5]

1. What do you mean by inheritance?
2. Explain polymorphism.
3. Differentiate between list and tuple.
4. What do you mean by file handling?
5. How do you plan to use exception handling on your project?

Group "B" "Objective Questions" [5 *1 = 5]

1. Which of the following methods is used to exclusively write a new file?
   a. r
   b. w
   c. a
   d. x

2. List is mutable?
   a. True b.False

3. If x = "Nepal", the output of print(x[:3]) is?
   a. Nepal b. Nep c. Ne d. Nepa

4. A special string literal used in Python to document modules, functions, classes, and methods is known as _____ .

5. What will print(len("Samakhusi")) return?
   a. 8 b. 9 c. 11 d. Error

Group C "Output of the code" [1*5 = 5]

1. Provide the output of the following code.

```
class BankAccount:
    def __init__(self, balance):
        self.__balance = balance

    def show_balance(self):
        return self.__balance

    def withdraw(self, amount):
        try:
            if amount <= 0:
                raise ValueError("Withdrawal amount is negative.")

            if amount > self.__balance:
                raise ValueError("Insufficient balance.")

            self.__balance -= amount
            print("Withdrawal successful.")

        except (ValueError, TypeError) as error:
            print("Withdrawal error:", error)


account = BankAccount(1000)

try:
    account.withdraw(10000)

except ValueError:
    print("Please enter a valid numeric amount.")

print("Bank Balance:", account.show_balance())
```

Group D "WAP" [1*5 = 5]

1. During heavy rainfall, Krishna Bhir in Nepal is highly vulnerable to landslides, which can block the highway and disrupt transportation. The Ministry of Transport plans to develop a Python-based landslide monitoring system and

has announced a vacancy for a Python Developer. As an applicant, you are required to design and develop the proposed system.

Create a Python class named `LandslideMonitor` with:

- Attributes: `location`, `rainfall`, and `road_status`
- A constructor to initialize these attributes
- A method named `display_warning()` that displays:
  - `"Road Open: Low Landslide Risk"` if rainfall is below 100 mm
  - `"Road Closed: Landslide Warning"` if rainfall is 100 mm or above
  -
- Create one object for **Krishna Bhir** with rainfall of **125 mm** and road status `"Blocked"`. Call the `display_warning()` method.

Group E "Debuging" [1*5 = 5]

1. The following Python program is intended to calculate the **molarity and molality of a 13% by-weight H_2SO_4 solution** having a density of **1.020 g/cm³**. However, the program contains errors. Identify the errors and rewrite the program correctly.

Molarity

```
percentage = 13
density = 1.020
molar_mass = 98

try
molarity = (density * percentage) / molar_mass
molality = (100 * percentage) / molar_mass * (100 - percentage)

print("Molarity =", round(molarity, 3), "mol/L")
print("Molality =", round(molality, 3), "mol/kg")

except ZeroDivisionError
print("The denominator cannot be zero")
```