WEST BENGAL COUNCIL OF HIGHER SECONDARY EDUCATION

SUBJECT: MODERN COMPUTER APPLICATION (COMA)

CLASS – XII	**PRACTICAL**	**FULL MARKS: 30**

1.	**Python Program**		**12 Marks**
	• Coding	**9 Marks**	
	• Output	**3 Marks**	
2.	**MYSQL**		**10 Marks**
	• Table creation	**3 Marks**	
	• Data insertion in table	**2 Marks**	
	• Two Queries	**5 Marks**	
3.	**Lab Book**		**3 Marks**
4.	**Viva**		**5 Marks**

Suggested Practical List

List of Suggestive Python Program

- Input a welcome message and display it.
- Input two numbers and display the larger / smaller number.
- Input three numbers and display the largest / smallest number.
- Generate the following patterns using nested loops:

Pattern 1	Pattern 2	Pattern 3
*	12345	A
**	1234	AB
***	123	ABC
****	12	ABCD
*****	1	ABCDE

- Write a program to input the value of x and n and print the sum of the following series:

  ➢ $1 + x + x^2 + x^3 + x^4 + \cdots x^n$

  ➢ $1 - x + x^2 - x^3 + x^4 - \cdots x^n$

  ➢ $x + \frac{x^2}{2} + \frac{x^3}{3} + \frac{x^4}{4} + \cdots \frac{x^n}{n}$

  ➢ $x + \frac{x^2}{2!} + \frac{x^3}{3!} + \frac{x^4}{4!} + \cdots \frac{x^n}{n!}$

- Determine whether a number is a perfect number, an Armstrong number or a palindrome.
- Input a number and check if the number is a prime or composite number.
- Display the terms of a Fibonacci series.
- Compute the greatest common divisor and least common multiple of two integers.
- Count and display the number of vowels, consonants, uppercase, lowercase characters in string.
- Input a string and determine whether it is a palindrome or not; convert the case of characters in a string.

- Find the largest/smallest number in a list.
- Input a list of numbers and swap elements at the even location with the elements at the odd location.
- Input a list of elements, search for a given element in the list.
- Write a random number generator that generates random numbers between 1 and 6.

Database Management System

● Create a student table and insert data. Implement the following SQL commands on the student table:

- ALTER table to add new attributes / modify data type / drop attribute
- UPDATE table to modify data
- ORDER By to display data in ascending / descending order
- DELETE to remove tuple(s)
- GROUP BY and find the min, max, sum, count and average.
- LIKE, DISTINCT, NOT IN, IN, JOIN, CARTISIAN PRODUCT, SET DIFFERENCE, UNION, INTERSECTION etc.