UNIVERSITY OF NORTH BENGAL

B.Sc. Honours 6th Semester Examination, 2022

DSE-P4-Computer Science (DSE-64L) (Practical)

Time Allotted: 2 Hours   Full Marks: 20

The questions are of equal value.
The figures in the margin indicate full marks.
All symbols are of usual significance.

The question paper contains DSE64L-E1L and DSE64L-E2L and DSE64L-E3L.
The candidates are required to answer any *one* from *three* courses.
Candidates should mention it clearly on the Answer Book.

DSE64L-E1L

MACHINE LEARNING PRACTICAL

Practical:	**15**
Viva:	**5**
Total	**20**

Answer any *one* question using Python/Matlab/Octave   20×1 = 20

1.   Write a program to calculate roots of a quadratic equation. Also show the output.   20

2.   Write a program to find sum and average of three positive numbers.   20

3.   Write a program to print multiplication table and print output.   20

4.   Write a program to check if a given year is leap year or not.   20

5.   Write a program to find largest number in an one-dimensional array.   20

6.   Write a program to reverse the elements of an array.   20

7.   Write a program to calculate area of a right angle triangle.   20

8.   Write a program to multiply two matrices ($m×n$).   20

9.   Write a program to add two ($m×n$) matrices.   20

10. Write a program to plot a line in *x-y* plane.   20

11. Write a program for scatter plotting in *xy* plane.   20

DSE64L-E2L

SYSTEM PROGRAMMING LAB

Program:	15
Viva:	5
Total	20

Answer any *one* question   20×1 = 20

1.   Write a lex program to count the number of words, present in a line.   20

2.   Write a lex program to count the number of vowels and consonants in a given string.   20

3.   Write a lex program to check if a given string is palindrome or not.   20

4.   Write a lex program to count the positive numbers, negative numbers and fractions.   20

5.   Write a lex program to check whether an input is an identifier or not.   20

6.   Write a lex program to identify a valid arithmetic expression.   20

7.   Write a lex program to check whether a given number is even or odd.   20

8.   Write a lex program to check if a given number is armstrong number or not.   20

9.   Write a lex program to check a valid email id.   20

10.   Write a lex program to check whether a given year is leap year or not.   20

DSE64L-E3L

CLOUD COMPUTING

Answer any *one* from following   20×1 = 20

1.   Create virtual machines that access different programs on same platform.   20

2.   Create virtual machines that access different programs on different platforms.   20

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