[23 HKPD1SNP- 24M]

MA 1st Semester (NEP) Exam. 2023 (W)

COMPUTER (DSE)

(Open Source Software)

[CA, S1-05]

Full Marks : 70

Time : 3 hours

The figures in the right-hand margin indicate marks.

1. Answer any *five* questions from the following: $10 \times 5 = 50$

(*a*) What is the use of Latex software ? Mention the steps of installing the Latex versions in Windows operating system. Write the name of commonly used Latex editors.

(*b*) With suitable example, mention the useful Latax commands for changing font sizes.

(*c*) What is Bibtax ? How can we generate a Bibtex file ? Explain how the styles plain, alpha, abbrev and unsrt work when they are used in bibliography.

(*d*) Consider the following Latex code and identify the errors. Finally write the program in correct form.

```
\documentclass {article}
\begin {document}
\maketitle
\chapter {Over view}
\section {Introduction}
\subsection {Definition}
```

\paragraph {}

In this document, ...

\end {document}

(*e*) What is resume ? Prepare your own resume by giving the respective Latex code. Include personal details, Education background, Experience and other Professional Training in separate Sections.

(*f*) Define operator and operand. Mention different types of operators available in Python. Write a Python program to find the biggest number among three numbers using Logical 'and' operator.

(*g*) Write the main use of Scilab. How do you declare a variable and a constant in Scilab ? Give 5 examples of predefined constants. Describe how vectors and matrices are represented in Scilab.

(*h*) Mention and explain with respective examples looping statements used in Python. Write the difference between break and continue statements used with loop.

2. Answer any *four* questions from the following: $5 \times 4 = 20$

(*a*) Name various document classes in Latex. Discuss them briefly.

(*b*) What is a package in Latex ? Name the Latex command to call a package. Discuss briefly about geometry package.

(*c*) Which environment is used to create a tabular structure ? Prepare the following table using Latex code.

Roll No.	Name	Programme	% Marks
10011	Tinku	M.Sc.IT	67%
21134	Pabitra	B.Com	75%
30015	Mohana	MCA	70%
41125	Pallavi	BCA	85%

(*Continued*)

(*d*) What are the Latex commands to include two figures horizortally ? Write the Latex code to create a document by including two figures tiger.jpg and monkey.jpg.

(*e*) Discuss various data types available in Python. Give example of each category.

(*f*) Define function. Write the function to print all palindrome numbers between a range.