Enlosure - VI

Offering Department: Mathematics Department
Part – II Generic Elective – I (for PG Programme)
To be offered in Semester – VIII
effective for the students admitted from 2016-2017 onwards

GE – I (for PG Programme) Semester – VIII			
16PMTGE01	**Practical : Introduction to Latex**	**2 hrs/wk**	**2 Credits**

Objectives:
Upon completion of the course students will be able to

1. Understand the purpose and nature of LaTeX.
2. Understand how LaTeX differs from a word processor.
3. Install and utilize LaTeX and its related components successfully on personal computer.
4. Create document using LaTeX including the features like line break, fonts size, page breaks.
5. Utilize LaTeX and its templates to compose Mathematical documents, presentations, and reports.
6. Identify, remember and effectively utilize symbols useful for mathematical type setting.
7. Create complete document including title page, index, chapters, tables graphics and bibliography

Introduction to LaTeX

Unit – 1:History and Basics of LaTex.

- History of LaTeX, How to install LaTeX,
- Basic Structure of LaTeX Document, Layout Design,
- Input file structures, Document class, Page Style, Packages.

Unit – 2:Simple documents and type setting

- Type-setting of Text, Structure of Document,
- Line Break and Page Break,
- Fonts and Size

Unit – 3: Type seting

- Different Environments,
- Cross references,
- Footnotes, Fancy header.

Unit – 4: Type seting

- Typesetting, single equation,
- Formulae, multiline single equation, multiple equations,

Unit – 5:Use of Graphicx and tables.

- Graphicx package,
- tabular environment,
- bibliography.

Text book:

1. Tobias Oetiker, Hubert Partl, Irene Hyna and Elisabeth Schlegl, The Not So Short Introduction to LaTeX 2ε, www.ctan.org.

Reference books:

1. George Grätzer (2007), More Math into LaTeX, 4th edition, Springer.
2. Michael Doob, A Gentle Introduction to TeX, www.ctan.org.
3. F. Mittelbach and M Goossens with Braams, Carlisle, and Rowley, The LaTeX Companion, second edition, Addison-Wesley Professional, 2004.

List of Practical

1. Basic Introduction to LaTeX, Structure of LaTeX document, First document produced using LaTeX.
2. Use of different fonts, size, apply page break and line break, use command for making text bold, italic, emphasis, underline.
3. Document structure using /chapter, /section, /subsection.
4. Cross referencing using /label and /ref command, Footnote and use of fancy header package.
5. Equation environment, single equation, multi line single equation.
6. Multi equations, symbols.
7. How to write array and matrix in LaTeX.
8. Preparing Tables using LaTeX.
9. Use of Graphicx package in LaTeX.
10. How to write bibliography using LaTeX.