

**2025**  
**Skill Enhancement Course**  
**LATEX**  
**Paper Code : SEC0206803**  
**Time : 1 Hour 30 Minutes**  
**Full Marks : 30**

*(The figures in the margin indicate the full marks for the questions)*

1. Answer the following questions : 1×5=5

- a) What is LaTeX? Who developed LaTeX?
- b) What do you mean by Preamble?
- c) Write  $\phi$  and  $\sigma$  in LaTeX.
- d) What is beamer?
- e) Which package is used for creating graphics in LaTeX document?

2. Answer *any five* of the following questions : 2×5=10

- a) Give some editors of Latex and write the advantages of using LaTeX?
- b) Write the given equation in Latex command

$$\lim_{\phi \rightarrow 0} \frac{\sin \phi}{\phi} = 1$$

- c) Write the LaTeX code for  $P \cup Q$  and  $P \cap Q$ .
- d) What is the use of the command `\author{}` and `\title{}` in LaTeX.



- e) Find the error in the following code:

```
\documentclass{article}  
\begin{document}  
\title{MyPage}  
\maketitle  
\begin{section}  
{ This is a book; }  
\begin{enumerate}  
\item This is my pen.  
\item This is a scale.  
\end{document}
```



- f) What is PSTricks? Mention its advantage.

- g) Write the LaTeX command for

$$(a+b)^3 = a^3 + b^3 + 3a^2b + 3ab^2$$

3. Answer *any three* of the following :

5×3=15

- a) Write a LaTeX document containing the following matrices:

$$A = \begin{bmatrix} a & b \\ c & d \end{bmatrix} \text{ and } B = \begin{bmatrix} 1 & 0 \\ \alpha & 1 \end{bmatrix}$$

- b) Typeset the following in Latex. "Let  $\gamma_1$ ,  $\gamma_2$  and  $\gamma$  be piecewise smooth curves in a domain  $D$  in  $C$ . Show that  $\int_{\gamma_1, \gamma_2} f \, dx = \int_{\gamma_1} f \, dx + \int_{\gamma_2} f \, dx$ "
- c) Draw a circle, square and a triangle in LaTeX using PSTricks.
- d) Write a LaTeX code to prepare a presentation containing four slides about any topic of Mathematics.
- e) Write the LaTeX codes to create a document containing Your Biodata.
- f) What are the different types of matrix environment in LaTeX? Give examples.