FYUGP 2nd Semester Final Examination, 2026

Subject: Mathematics (Skill Enhancement Course)

Paper Code: SEC0215903N

Paper Name: LaTeX

Full Marks: 30 **Time: 1.5 hours**

1. Answer the following questions: **1 x 5 = 5**

a. What is LaTeX?

b. Who developed LaTeX?

c. What is preamble?

d. What is PSTrick?

e. What is the environment required to write serial numbers in LaTeX?

2. Answer the following questions (any five): **2 x 5 = 10**

a. Write the latex codes for union and intersection.

b. What is beamer and why it is used for?

c. Which packages are used for creating graphics and mathematical equations in LateX document?

d. Write the LateX codes for creating

$$\int_{-\infty}^{\infty} e^{-x^2}\,dx = \sqrt{\pi}$$

e. What is the purpose of the command \author{} and \title{} in LaTeX?

f. What are the advantages of using PSTricks?

g. Find the error in the following code:

```
\documentclass{article}
\begin{document}
\title{MyPage}
\maketitle
\begin{section}
{ This is my page; }

\end{document}
```

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h. What is the LaTeX command to put subscript symbol?

i. What are the LaTeX command to put arrows in a document?

j. What is the environment used to add an image or graphics in a LaTeX document?

3. Answer the following questions (any three): **5 x 3 = 15**

a. Write a LateX document containing the following matrices:

$$A=\begin{bmatrix}1 & 2\\ 0 & 4\end{bmatrix} \text{ and } B=\begin{bmatrix}1 & 0\\ \alpha & 2\theta\end{bmatrix}$$

b. Write the LaTeX codes to draw a circle, square and a triangle in a document.

c. Write a LaTeX code to prepare a presentation containing four slides about any topic of Mathematics.

d. Write the LaTeX codes to create your biodata.

e. Write the LaTeX codes to create a document containing information related to any mathematics topic.

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