Rayat Shikshan Sanstha's Rajarshi Chhatrapati Shahu College Kolhapur Department of Mathematics A Report on Short Term Course "Mathematics Into LaTeX" 2024-25

The Department of Mathematics, Rajarshi Chhatrapati Shahu College, Kolhapur organized a short term course on "Mathematics Into Latex" for Mathematics. students in the college. In this course students learns how to create a program for simple mathematical problem and typing of equations in LaTeX. This course has 30 lectures. This course starts from 31/01/2025 to 28/02/2025. Exam was conducted on 01/03/2025 and it is conducted by Mr. Shedge S.D. Total 10 Students are successfully completed this course.

Outcomes: After completion of this course students will be able to:

- How to write research paper in LaTeX
- Aware about LaTeX Software.

No. of Beneficiaries: 10

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Department of Mathematics
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Rayat Shikshan Sanstha's Rajarshi Chhatrapati Shahu College Kolhapur Department of Mathematics Short Term Course Course: Mathematics into LaTeX (2024-25)

Objectives

The purpose of this course is

- i) To provide an understanding of the basic mechanisms of LaTeX.
- ii) To acquaint students with the latest typesetting skills.

Course Outcomes

After completion this course, Student will be able to

- i) Write a simple LaTeX input document based on the article class.
- ii) Turn the input document into pdf with the pdflatex program.
- iii) Format Words, Lines, and Paragraphs.
- iv) Understand how to present data using tables

Syllabus

Unit 1. Introduction to LaTeX

[8 Lectures]

Definition and application of LaTeX, Preparation and Compilation of LaTeX input file, LaTeX Syntax , Keyboard Characters in LaTeX

Unit 2.Listing and Tabbing Texts

[7 Lectures]

Listing Texts, Tabbing Texts Through the tabbing Environment

Unit 3.Listing and Tabbing Texts

[8 Lectures]

Listing Texts, Tabbing Texts Through the tabbing Environment

Unit 4.Table Preparation

[7 Lectures]

Table Through the tabular Environment, Table Through the tabularx Environment, Vertical Positioning of Tables, Sideways (Rotated) Texts in Tables, Adjusting Column Width in Tables, Additional Provisions for Customizing Columns of Tables, Merging Rows and Columns of Tables.

• Reference Books:

- 1. LaTeX, A Document Preparation System, User's Guide and Reference Manual, Leslie Lamport, Addison-Wesley Publishing Company, Inc., 1994.
- 2. LaTeX Beginner's Guide, Stefan Kottwitz, Packt Publishing Ltd, 2011.
- 3. LaTeX and Friends, M.R.C. van Dongen, Springer-Verlag Berlin Heidelberg ,2012

Workload

Sr. No.	0-1-1	N. 6751	N C Denotical	Total Lectures
SI. NO.	Content	No. of Theory	No. of Practical	Total Lectures
		Lectures 1 pr=3hr		
1	Unit 1	2	2 2pr=2*2=6L	
2	Unit 2	4 1pr=1*3=3L		07
3	Unit 3	2 2pr=2*2=6L		08
4	Unit 4	4	4 1pr=1*3=3L	
Total		12	18	30

Coordinator:

Mr. Shedge S.D.

Name of Faculty:

Mr. Shedge S.D.

• BOS Committee:

Mr. Shedge S.D.

Miss. Jadhav R.J.

Mr. Kolhe G.K.

Time Table

Theory

Sr.	Day and	Time	Unit	Name of Faculty/	Theory/ Practical
No.	Date			Resource Person	
1	Friday,	11.00 am to	UNIT I	Mr. Shedge S.D.	Theory
	31/01/2025	11.45 a.m.		11 01 1 0 0 D	Theory
2	Friday,	12.00 am to	UNIT I	Mr. Shedge S.D.	Theory
	31/01/2025	12.45 a.m.	TILLIAN I	Mr. Shedge S.D.	Theory
3	Saturday,	11.00 am to	UNIT I	Mr. Shedge 3.D.	1110017
	01/02/2025	11.45 a.m.		Mr. Shedge S.D.	Theory
4	Saturday,	12.00 am to	UNIT I	Mr. Shedge 3.D.	Theory
	01/02/2025	12,45 a.m.		M. Chadas CD	Theory
5	Friday,	11.00 am to	UNIT 2	Mr. Shedge S.D.	Theory
	07/02/2025	11.45 a.m.		11 01 1 0 0	Theory
6	Friday,	12.00 am to	UNIT 2	Mr. Shedge S.D.	Theory
	07/02/2025	12.45 a.m.			Theory
7	Saturday,	11.00 am to	UNIT 2	Mr. Shedge S.D.	Theory
	08/02/2025	11.45 a.m.			(T)
8	Saturday,	12.00 am to	UNIT 2	Mr. Shedge S.D.	Theory
	08/02/2025	12.45 a.m.			THE STATE OF THE S
9	Friday,	11.00 am to	UNIT3	Mr. Shedge S.D.	Theory
	1802/2025	11.45 a.m.			
10	Friday,	12.00 am to	UNIT3	Mr. Shedge S.D.	Theory
	18/02/2025	12.45 a.m.			
11	Saturday,	11.00 am to	UNIT3	Mr. Shedge S.D.	Theory
	19/02/2025	11.45 a.m.			
12	Saturday,	12.00 am to	UNIT3	Mr. Shedge S.D.	Theory
	19/02/2025	12.45 a.m.			

Time Table

Practical

Sr. No.	Day and Date	Time	Unit	Name of Faculty/ Resource Person	Theory/ Practical
1	Monday, 07/02/2025	08.00 am to 11.00 a.m.	UNIT 1	Mr. Shedge S.D.	Practical
2	Monday, 14/02/2025	08.00 am to 11.00 a.m.	UNIT 1	Mr. Shedge S.D.	Practical
3	Tuesday 15/02/2025	08.00 am to 11.00 a.m.	UNIT 2	Mr. Shedge S.D.	Practical
4	Monday, 21/02/2025	08.00 am to 11.00 a.m.	UNIT 2	Mr. Shedge S.D.	Practical
5	Tuesday 22/02/2025	08.00 am to 11.00 a.m.	UNIT 3	Mr. Shedge S.D.	Practical
6	Monday, 28/02/2025	08.00 am to 11.00 a.m.	UNIT 3	Mr. Shedge S.D.	Practical

Coordinator Short Term Course

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Department of Mathematics Larshn Chh. Shahu Coile Se Kolhapur.

Chairman Short Term Course

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KOLHAPÜR

Rayat Shikshan Sanstha's Rajarshi Chhatrapati Shahu College Kolhapur Department of Mathematics Short Term Course Course: Mathematics into LaTeX

(2024-25)

Student List

Sr.	Roll	Name of The Student	Signature
No.	No.		
1	SII-1	BORGAVE OM AJIT	ang-
2	SII-4	!KOLEKAR SAMRUDDHI SACHIN	38X olekar
3	SII-45	JAMADAR MAHAMADREHAN JAVED	M Jaradas
4	SII-65	BABAR OMKAR SANJAY	papar.
5	SII-70	KAMBLE ARJUN SUNIL	Bramble
6	SII-71	KAMBLE BHUMIKA CHANDRAKANT	Blendle.
7	SII-73	!PATIL TANVI BABAN	T320HI
8	SII-74	POWAR RAHUL PANDIT	Schul Freell
9	SII-75	POWAR SOMNATH BALASO	2 omath.
10	SII-76	POWAR SHREYASH DHONDIRAM	SanFIL

Hoad

Department of Mathematics Reparshri Chh. Shahu College Kolhapur.

Rayat Shikshan Sanstha's Rajarshi Chhatrapati Shahu College Kolhapur Department Of Mathematics Mathematics Into LaTeX

Presenty Sheet 2024-25

					2024	The	ory					
Roll No.	31/01/2025	31/01/2025	1/2/2025	1/2/2025	7/2/2025	7/2/2025	8/2/2028	8/2/2025	18/2/2025	18/2/2025	19/2/2025	19/2/2025
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Department of Mathematics
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Kolhapur.

Rayat Shikshan Sanstha's Rajarshi Chhatrapati Shahu College Kolhapur Department Of Mathematics Mathematics Into LaTeX Presenty Sheet 2024-25

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Head Department of Mathematics Liuishri Chh, Shahu College Kolhapur.

Rayat Shikshan Sanstha's Rajarshi Chhatrapati Shahu College Kolhapur Department of Mathematics Short Term Course Course: Mathematics into LaTeX

(2024-25)

	50Marks	
Q1) Tikk the Correct Al	ternative	(10M)
		(10M)
Q2) Solve any two of th	e following.	_
(Run Programme on Co	mputer)	
Q.3) Solve any two of the	he following.	(20M)
(Run Programme on Co	omputer)	
Q4) Oral	-	(10M)

Head Department of Mathematics त्यांबाshri Chh, Shahu Collega Kolhapur,

Rayat Shikshan Sanstha's

Rajarshi Chhatrapati Shahu College Kolhapur Short Term Course

Mathematics Into LaTeX

Marks: 50 Time - 11am to 02.00pm Date - 01/03/2025 (10)Q1) Tikk the Correct Alternative 1. Which is correct syntax for Latex Table? c)\ start{tables} d) \open{tables} b) \begin{Tabular} a) \begin{tables} 2. Correct syntax for $\frac{a}{b}$ is d) \$divide{a}{b}\$ c)\$a/b\$ b) \$\frac{a}{b}\$ a) \$frac{a}{b}\$ 3. Correct syntax for 2^{a+b} is d) $\exp\{2\}\{a+b\}$ c) 2^{a+b} b) 2^a+b a) 2^a+b 4. Correct syntax for equation ax + by = c is c) ax + by = c d) ax + by = cb)\ ax + by = ca) ax + by = c5. Which is correct syntax for latex? d) \start{}...\end{} c) \start{}...\stop{} b) \begin{}...\end{} a) \begin{}...\stop{} 6.Latex provides which of the following environment for list? c) Desciption d) All of the above b) Itemize a) Enumerate 7. Display the title by syntax_ c)\maketitle d)maketitle a)\make b)\title 8. The syntax for Real Analysis(bold font) is b) \textbf{Real analysis} a) \textrm{Real Analysis} d) \text(Real Analysis) c) textbf{Real Analysis} 9. The syntax for $\sqrt{2}$ is c) $\sqrt{2}$ d) sqrt(2) b) sqrt{2} a) \sqrt{2} 10. Latex is developed by d) Brendon Eich c) Dannis Ritchie b) Guido a) Donald E. Knuth (10M)Q2) Solve any two of the following. 1) Run in LaTeX code for the following equation. $\int_{-\infty}^{\infty} e^{-x^2} dx = \pi$ 2) Run in LaTeX for the following equation. 3) Run in LaTeX program to rotate a figure counter-clock wise by an angle 45°. 4) Run in LaTeX code for following system of equation. y = d(1) y = cx + d(2)

$$y = bx^{2} + cx + d$$
 (3)
 $y = ax^{3} + bx^{2} + cx + d$ (4)

Q.3) Solve any two of the following.

(20M)

1) Run in LaTeX code for the following system of equation using gather environment.

 $x = r \cos \varphi \sin \theta$

 $y = r \sin \varphi \sin \theta$

 $z = r cos \theta$

Run in LaTeX code for the following.

ii) $\begin{pmatrix} 5 & -6 & 7 \\ 1 & 4 & 3 \\ 3 & 7 & 2 \end{pmatrix}$ iii) $\begin{bmatrix} 5 & -6 & 7 \\ 1 & 4 & 3 \\ 3 & 7 & 2 \end{bmatrix}$ iv) $\begin{bmatrix} 5 & -6 & 7 \\ 1 & 4 & 3 \\ 3 & 7 & 2 \end{bmatrix}$

3) Run in LaTeX code for the following.

 $f(x) = x^3 - 4x^2 + 5x + 10$ $f(x) = x^3 - 4x^2 + 5x + 10$ $f(x) = x^3 - 4x^2 + 5x + 10$ $f(x) = x^3 - 4x^2 + 5x + 10$ $f(x) = x^3 - 4x^2 + 5x +$

4) Run in LaTeX code for following system of equation using eqnarray environment.

x + 2y - 2z = -11y + z = 11z = 21

Q4) Oral

(10)

Rayat Shikshan Sanstha's Rajarshi Chhatrapati Shahu College Kolhapur Department of Mathematics Short Term Course

Course: Mathematics into LaTeX

(2024-25

Marks List

Sr. No.	110111101	Name of The Student	Marks out of 50
1	SII-1	BORGAVE OM AJIT	40
2	SII-4	!KOLEKAR SAMRUDDHI SACHIN	46
3	SII-45	JAMADAR MAHAMADREHAN JAVED	44
4	SII-65	BABAR OMKAR SANJAY	48
5	SII-70	KAMBLE ARJUN SUNIL	48
6	SII-71	KAMBLE BHUMIKA CHANDRAKANT	44
7	SII-73	!PATIL TANVI BABAN	40
8	SII-74	POWAR RAHUL PANDIT	40
9	SII-75	POWAR SOMNATH BALASO	42
10	SII-76	POWAR SHREYASH DHONDIRAM	40

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Department of Mathematics Cajarshri Chh, Shahu Collega Kolhapur,







Rajarshi Chhatrapati Shahu College, Kolhapur Certificate Course In Mathematics Into Latex 2024-25

This is to certify Mr./Miss _

completed the course of Mathematics Into Latex from 31/01/2025 to 29/02/2025(30 Hours) Organized by Has successfully Department of Mathematics, Rajarshi Chhatrapati Shahu College Kolhapur.

Coordinator

Principal, R.C. Shahu College, Kolhapur

IQAC Coordinator