NAME OF THE COURSE: FREE AND OPEN SOURCE SOFTWARE- LaTeX

OFFERING DEPARTMENT: MATHEMATICS

Duration: 36 Hours

OBJECTIVES

To teach high quality type setting. It is most often used for medium to large technical or scientific documents but it can be used for almost any form of publishing.

COURSE STRUCTURE

Module 1: INRODUCTION (8 HOURS)

Installation of LaTeX, Features of Latex etc.

Module 2: LATEX ON WINDOWS (12 HOURS)

Type setting in windows using LaTeX, Type setting using LaTeX in Linux etc.

Module 3: COMPILING (8 HOURS)

How to compile different TeX files, common errors while compiling and corrections etc.

Module 4: BEAMER (8 HOURS)

Power point presentations using LaTeX

REFERENCES:

1. Leslie Lamport, LaTeX: A document preparation system, 2nd Edition, Addison-Wesley 1994
2. F Mittelbach, M Goossens, TheLaTeX companion, 2nd Edition, 2004.

EVALUATION SCHEME

CONTINUOUS EVALUATION		20 MARKS
EXAMINATION	: THEORY	30 MARKS
	: PRACTICAL	50 MARKS
TOTAL		100 MARKS

Question Pattern: THEORY

Part	Type of Questions	No of questions to be answered	Marks	Total Marks
A	Short answer type	5 out of 7	2	10
B	Short essay type	2 out of 3	5	10
C	Essay type	1 out of 2	10	10
		8		30

Question Pattern: PRACTICAL

Part	Type of Questions	No of questions to be answered	Marks	Total Marks
A	Short essay type	2 out of 3	10	20
B	Long essay type	1 out of 2	30	30
		3		50

NAME OF THE COURSE: QUANTITATIVE TECHNIQUES FOR COMPETETIVE EXAMINATIONS

OFFERING DEPARTMENT: MATHEMATICS

Duration: 36 Hours

OBJECTIVES

To prepare students of all streams to approach competitive examinations. Detailed explanation and short cut method for solving problems are to be introduced to students, so that they can acquire better understanding of concepts and problem solving skill.

COURSE STRUCTURE

Module 1:– 8 Hours

Types of numbers, Multiplication and division of numbers, Permutations and combinations – simple applications, Trigonometry introduction, Values of trigonometric ratios of 0^0, 30^0, 45^0, 60^0& 90^0, Heights and distances – Simple cases - (application of sinx, cosx, tanx, and their reciprocals only).

Module 2: -10 Hours

Probability – Introduction – Sample spaces and events, Simple examples like tossing coin, tossing die etc., Number series, Odd man out, Number puzzles, Clock and calendar, Races and games, Inequality.

Module 3:– 8 Hours

HCF and LCM of numbers, Fractions, Squares and square roots, cube and cube roots, simplifications, Percentage, Profit and loss, Simple interest , Compound interest.

Module 4:- 10 Hours

Ratio and Proportion, Time and work, Partnership, Mixture, Work and wages, Time and distance, Elementary mensuration – Area and perimeter of polygons, Elementary Algebra.

REFERENCES:

1. M Tyra & K Kundan –Concepts of Arithematic, BSC publishing company Pvt. Ltd.
2. S K Sinha, S Satyanarayan, Col. J S Rana(Retd.)-The Complete Reference Manual for CMAT, Arihant Publications Ltd.

EVALUATION SCHEME

CONTINUOUS EVALUATION : 20 MARKS

WRITTEN EXAMINATION : 80 MARKS

TOTAL : 100 MARKS

Question pattern

Part	Type of Questions	No of questions to be answered	Marks	Total Marks
A	Objective type With negative marks	All 15 questions	2 0.5 marks will be deducted for each incorrect answer	30
B	Objective type	Only 10 out of 12	3	30
C	Objective type with multiple answers	Only 5 out of 7	4 Marks will be awarded only if all correct choices are answered	20
		30		80

NAME OF THE COURSE: REASONING ABILITY

OFFERING DEPARTMENT: MATHEMATICS

Duration: 36 Hrs

OBJECTIVES

This is an essential foundation for students to prepare systematically for and be successful in competitive examinations. The program inculcates analytical thinking habits and brings home the importance of innovation in problem solving.

COURSE STRUCTURE & TIME DISTRIBUTION

SL NO.	Module	Total sessions	Hours	Total Time
1	Analogy, Classification	2	1	2
2	Coding – Decoding	2	1	2
3	Alphabet test, Series test, Mathematical operations	2	1	2
4	Blood relations	2	1	2
5	Ranking and Time sequence	2	1	2
6	Sitting Arrangement	2	1	2
7	Direction sense	2	1	2
8	Syllogism, Decision making	4	1	4
9	Statement & Assumptions	3	1	3
10	Statement & Conclusions	3	1	3
11	Cause & effect	3	1	3
12	Input-output	3	1	3
13	Non verbal Reasoning	6	1	6
	Total			36 Hours

REFERENCES:

1. B S Sijwali- Verbal and Non-verbal Reasoning, Arihant Publications Ltd, New Delhi
2. Dr. R S Aggarwal – Verbal and Non-verbal Reasoning, S Chand Publications, New Delhi

EVALUATION SCHEME

CONTINUOUS EVALUATION	20 MARKS
WRITTEN EXAMINATION	80 MARKS
TOTAL	100 MARKS

Question pattern

Part	Type of Questions	No of questions to be answered	Marks	Total Marks
A	Objective type With negative marks	All 10 questions	1	10
B	Objective type	Only 10 out of 12	2	20
C	Objective type	Only 10 out of 12	3	30
D	Objective type	Only 5 out of 7	4	20
		35		80