CERTIFICATE COURSE IN COMPUTER SCIENCE

INTRODUCTION

Now a days Computers have brought about a revolution across all sectors. They have changed the face of society. They are no longer specialized tools to be used by specially trained people. They are ubiquitous and used in almost every sphere of life. Computers are the best means for storage and management of data; they can serve as huge knowledge bases and can be harnessed for all sorts of financial transactions owing to their processing power and storage capacities. As computers are a daily utility, they have gained immense importance in day-to-day life. Their increasing utility has made computer education the need of the day.

The basic aim of this course is to enable the high school students to meet the future challenges in computer applications.

LEARNING OBJECTIVES

1. *To familiarize with basics of information technology.*
2. *To develop basic skills of using tools for word processing, presentation and database management.*
3. *To develop an understanding of how computers store and process data.*
4. *To access global information sources with communication effects by the use of technology based tools.*
5. *To develop mastery over basic operational skills over functions of the operating system and computer systems.*
6. *To exhibit skills in the use of technology to gather, process and analyse data for preparation of reports through multimedia presentation.*
7. *To develop the ability to describe the major components of computer hardware, their functions*
8. *To develop an understanding of the fundamental concepts of programming and the ability to apply the same.*
9. *To acquire knowledge and understanding of the terms, symbols, concepts, principle, activities and operations.*
10. *To create an awareness of ethical issues related to computing.*

BROAD OUTLINES OF THE CONTENT (CLASS – IX)

There will be two papers in the subject.
Paper I – Theory   - 2 ½ hours -100 marks   (35 weeks-105 hrs)
Paper II – Practical   - 2 hours   - 50 marks

PAPER – I- COMPUTER FUNDAMENTALS (THEORY), FM - 100
PAPER –II PRACTICAL – MS DOS & MS OFFICE
(Assignments based on Theory paper-I, and Project works), FM – 50

PAPER – I (COMPUTER FUNDAMENTALS)   DETAILED CONTENTS

UNIT	CHAPTERS	HOURS	MARKS	
Unit-1	**Introduction**	4	6	12
	Basic Computer Organisation	4	6	
Unit-2	**Input Output Devices**	7	10	20
	Processor and Memory	7	10	
Unit-3	**Data Representation**	6	8	18
	Introduction to Operationg System	7	10	
Unit-4	**Computer Software**	5	7	14
	Microsoft Windows	5	7	
Unit-5	**Introduction to Word Basic**	7	10	20
	Introduction to Excel Basic	7	10	
Unit-6	**Introduction to Power Point**	7	10	16
	Basic Knowledge of PC maintenance	4	6	
TOTAL		70	100	100

PAPER –II - PRACTICAL –MS DOS & MS OFFICE = 50 marks,

Practical (Assignments based on Theory paper I)- 40 marks, project works – 10 marks and total duration of the practical classes will be 35 hours.

The detailed syllabus of class – IX (Paper – I & Paper – II) is attached as annexure.

BROAD OUTLINES OF THE CONTENT (CLASS – X)

CLASS – X

There will be two papers in the subject.

Paper III – Theory   - 2 ½ hours -- 100 marks   (20 Weeks – 60 Hours)

Paper IV – Practical   - 2 hours - 50 marks.

PAPER – III COMPREHENSIVE C PROGRAMMING & NETWORKING (THEORY)

PAPER-IV   C PROGRAMMING AND INTERNET(PRACTICAL)

(Assignments based on Theory paper-III and Project works), FM – 50

DETAILED CONTENTS

PAPER – III COMPREHENSIVE C PROGRAMMING & NETWORKING (THEORY)

UNIT NO	CONTENTS	HOURS	MARKS
Unit-1	Overview of C	3	8
	Components of C	4	10
Unit -2	I/O Operations	5	12
Unit-3	Branching and Looping	5	12
Unit-4	Function	6	15
Unit-5	Array and Structure	7	18
Unit-6	Data Communication and Computer Network	6	15
	Internet	4	10
TOTAL		40	100

PAPER-IV   C PROGRAMMING AND INTERNET(PRACTICAL), FM = 50 MARKS

Practical (Assignments based on Theory paper III- 40 marks, project works – 10 marks and total duration of the practical classes will be 20 hours.

The detailed syllabus of class – X (Paper – III & Paper – IV) is attached as annexure.

→There shall be one theory and one practical paper comprising 100 and 50 marks respectively in each of the classes IX and X.

→The evaluation will be made by the board at the end of each session for the said classes.

→The practicals will be internally assessed by the respective schools and the marks obtained by the candidates will be submitted by the concerned schools to the board.

→The theory papers will be evaluated externally by the Board of Secondary Education.

------XXX------