

COMPUTER SCIENCE AND ENTREPRENEURSHIP

Part-I	50 Marks
Part-II	50 Marks
Practical	50 Marks
Total	150 Marks

Part-I (Class-IX)	Marks: 50	Time: 2:00 Hours
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UNIT 1:	INTRODUCTION TO SYSTEMS	
	Introduction	
	1.1 Theory of Systems	1.2 Types of Systems
	1.3 System and Science	1.4 Computer as a System
	1.5 The Architecture of von Neumann Computers	
	1.6 Computing Systems	
UNIT 2:	NUMBER SYSTEMS	
	Introduction	
	2.1 Numbering Systems	
	2.2 Data representation in Computing Systems	
	2.3 Storing Real Values in Computer Memory	
	2.4 Binary Arithmetic Operations	
	2.5 Common Text Encoding Schemes	
	2.6 Storing Images, Audio and Video in Computers	
UNIT 3:	DIGITAL SYSTEMS AND LOGIC DESIGN	
	Introduction	
	3.1 Basics of Digital Systems	
	3.2 Boolean Algebra and Logic Gates	
	3.3 Simplification of Boolean Functions	
	3.4 Creating Logic Diagrams	3.5 Application of Digital Logic
UNIT 4:	SYSTEM TROUBLESHOOTING	
	Introduction	
	4.1 System Troubleshooting	4.2 Troubleshooting Strategies
UNIT 5:	SOFTWARE SYSTEM	
	Introduction	
	5.1 Software	
	5.2 Introduction to System Software	5.3 Application Software
UNIT 6:	INTRODUCTION TO COMPUTER NETWORKS	
	Introduction	
	6.1 Network as a System	
	6.2 Fundamental Concepts in Data Communication	
	6.3 Networking Devices	6.4 Network Topologies
	6.5 Transmission Modes	6.6 The OSI Networking Model
	6.7 Ipv4 and Ipv6	
	6.8 Protocols and Network Services	
	6.9 Network Security	6.10 Types of Networks
	6.11 Real-World Applications of Computer Networks	
	6.12 Standard Protocols in TCP/IP Communications	
	6.13 Network Security Methods	
UNIT 7:	COMPUTATIONAL THINKING	
	Introduction	
	7.1 Definition of Computational Thinking	
	7.2 Principles of Computational Thinking	
	7.3 Algorithm Design Methods	7.4 Algorithmic Activities
	7.5 Dry Run	
	7.6 Introduction to LARP (Logic of Algorithms for Resolution of Problems)	

UNIT 8:	7.7	Error Identification and Debugging	
		WEB DEVELOPMENT WITH HTML, CSS AND JAVASCRIPT	
		Introduction	
	8.1	Web Development	
	8.2	Basic Components of Web Development	
	8.3	Getting Started with HTML	8.4 HTML Basic Structure
	8.5	Creating Content with HTML	8.6 Styling with CSS
	8.7	Introduction to JavaScript	8.8 Developing and Debugging
UNIT 9:		DATA SCIENCE AND DATA GATHERING	
		Introduction	
	9.1	Data	9.2 Data Types
	9.3	Organising and Analysing Data	9.4 Data Types
	9.5	Data Storage Techniques	9.6 Data Visualization
	9.7	Data Pre-Processing and Analysis	
	9.8	Collaborative Tools and Cloud Storage	
	9.9	Introduction to Data Science	
	9.10	Big Data and Its Applications	
UNIT 10:		EMERGING TECHNOLOGIES IN COMPUTER SCIENCE	
		Introduction	
	10.1	Introduction to Artificial Intelligence (AI)	
	10.2	AI Algorithms and Techniques	
	10.3	Introduction to Internet of Things (IoT)	
	10.4	Implications and Future of Emerging Technologies	
UNIT 11:		ETHICAL, SOCIAL AND LEGAL CONCERNS IN COMPUTER USAGE	
		Introduction	
	11.1	Responsible Computer Usage	
	11.2	Safe and Secure Operation of Digital Platforms	
	11.3	Best Practices in Online Behavior	
	11.4	Legal and Ethical Frameworks	
	11.5	Intellectual Property Rights	11.6 Responsible Internet Use
	11.7	Impact of Computing on Society	
UNIT 12:		ENTREPRENEURSHIP IN DIGITAL AGE	
		Introduction	
	12.1	Entrepreneurship	
	12.2	Entrepreneurship in the Digital Landscape	
	12.3	Digital Tools and Platforms	12.3 Business Idea Generation
	12.5	Developing Business Plans	
	12.6	Ethical and Sustainable Entrepreneurship	

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Marks: 50	Part-II (Class-IIX)	Time: 2:00 Hours
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- Unit 1: Introduction to Programming
- 1.1 Programming Environment
Integrated Development Environment (IDE), Text Editor, Compiler
- 1.2 Programming Basics
Reserved Words, Structure of a C Program, Purpose and Syntax of comments in C Programme
- 1.3 Constants and Variables
Constants, Variables, Data type of a Variable, Name of a variable, Variable Declaration, Variable initialization
- Unit 2: User Interaction
- 2.1 Input/output (I/O) Functions
printf(), Format Specifiers, scanf(), getch(), Statement Terminator, Escape Sequence
- 2.2 Operators
Assignment Operators, Arithmetic Operators, Relational Operators, Assignment Operator (=) and equal to Operator (==), Logical Operators, Unary vs Binary Operators, Operators' Precedence
- Unit 3: Conditional Logic
Control Statements
Selection Statements
If Statement, If-else Structures, Nested If-else Structures, Solved Example Problems
- Unit 4: Data and Repetition
Data Structures
Array, Array Declaration, Array Initialization, Accessing array elements, Using variables as array indexes
Loop Structures
General Structure of loops, General syntax of for loop, Nested Loops, Solved Example Problems, Loops and Arrays, Solved Examples Problems
- Unit 5: Functions
Types of Functions, Advantages of Functions, Structure of a Function, Defining a Function
Glossary Indexes Answers
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