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

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)

Authors: **Prof. Dr. Muhammad Atif,**
(Phd Computer Science) Professor of Computer Science, Lahore Garrison University, Lahore

Prof. Dr. Syed Waqar Ul Qounain Jaffry,
(Phd Computer Science) Chairman Dept. of IT, University of the Punjab, Allama Iqbal Campus (Old Campus) Shahrah-e-Quaid-e-Azam, Lahore.

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