### Part One

# Conceptual Foundations of Accounting Information Systems 1

#### Chapter 1

# Accounting Information Systems: An Overview

3

Why Study Accounting Information Systems? 4
The Role of the Accounting Information System 6
Analysis of the Accounting Information System 11
The Systems Life Cycle 24
Future Challenges to Accounting Information
Systems 29

Summary 32
Review Questions 33
Discussion Questions 34
Problems and Cases 34
References 36

### Chapter 2

# Organization and Accounting Information Systems

37

Introduction to Concepts of Organization 38 Business Organization 40 Responsibility Accounting 47

Summary 51 Review Questions 51 Discussion Questions 52 Problems and Cases 52 References 59

#### Chapter 3

# Accounting Information Processing: Elements and Procedures 60

Elements of Accounting Cycles 61 Principles of Forms Design 71 Coding Techniques 74

Summary 83
Review Questions 84

Discussion Questions 85 Problems and Cases 85 References 91

#### Part Two

# The Technology of Information Systems 93

#### Chapter 4

### A Review of Mainframe Computer Hardware

**95** 96

Physical Components of an Information System
Central Processing Unit 99
Secondary Storage Devices and Media 102
Input Devices 105
Computer Output Devices 109
Increasing System Throughput 112
The Future of Computer Hardware 113

Summary 114

# Appendix: Disk, Tape, and Card Storage and Speeds 116

Review Questions 117
Discussion Questions 119
Problems and Cases 119
Problems and Cases for Appendix 123
References 123

### Chapter 5

# A Review of Software Concepts

125

Levels of Computer Languages 127
Systems Software 131
Application Software 135
Software Development 136
Programming and Documentation Tools 141

Summary 149

Appendix A: Procedure-Oriented Programming Languages	150
Appendix B: Decision Support	
and Expert Systems	156
Review Questions 159	
Discussion Questions 160	
Problems and Cases 160	
References 162	
Chapter 6	
Microcomputers and Accounting Information Systems	164
An Introduction to Microcomputers 165	
Microcomputer Hardware 170	
Microcomputer Software 178	
Use of Micros in Accounting and Auditing	189
Summary 192	
Review Questions 192	
Discussion Questions 193	
Problems and Cases 194	
Case Study: Selecting a Small, Business-Oriented Computer	202
References 204	
Chapter 7	
Data Communications and Advanced Systems	206
Fundamental Data Communications Concept	s 207
Data Communications Hardware 210	
Data Communications Software 212	
Communications Channels 214	
Communications Networks 221	
Data Communications Applications 233	
Summary 239	
Review Questions 240	
Discussion Questions 242	
Problems and Cases 242	
References 252	

#### Chapter 8

# Data Base and File-Oriented Systems

254

The File and Data Base Approaches to Data Storage 255
Logical and Physical View of Data 263
Data Base Management Systems 265
File Organization and Access 272
Data Base Organization and Access 279
File and Data Base Design
Considerations 286
Impact of Data Base Systems on Accounting 293

Summary 293
Review Questions 294
Discussion Questions 295
Problems and Cases 296
References 301

### Part Three

### The Systems Life Cycle 303

# Chapter 9

# The Systems Development Process: An Overview

305

The Stage Hypothesis of Data Processing Growth 307 Planning and Managing Systems Development 308 Behavioral Aspects of Change 317 Feasibility Analysis 321

Summary 329
Review Questions 330
Discussion Questions 331
Problems and Cases 331
References 342

#### Chapter 10

# Systems Analysis and Systems Acquisition

343

Systems Analysis 344
Systems Survey 348
Feasibility Study 353
Systems Acquisition 361

Summary 372
Review Questions 374
Discussion Questions 375
Problems and Cases 376
References 384

#### Chapter 11

#### Systems Design

386

Conceptual (General) Systems Design 387 Physical (Detailed) Systems Design 390 Systems Analysis and Design Tools and Techniques 396

Summary 420
Review Questions 420
Discussion Questions 421
Problems and Cases 422
References 440

# Chapter 12

# Systems Implementation

442

Implementation and Conversion 443
Systems Operation and Management Functions 455
Summary 463

#### Appendix: PERT: A Project Scheduling Technique

464

Review Questions 471
Discussion Questions 472
Problems and Cases 473
References 485

#### Part Four

# Control and Audit of Accounting Information Systems 487

Chapter	1	3
---------	---	---

# Control and Accounting Information Systems

489

Introduction to Control Concepts 490
The Control Environment 495
Control Procedures 499
The Accounting System 504
Analysis of the Costs and Benefits of Internal Control 509

Summary 514
Review Questions 515
Discussion Questions 516
Problems and Cases 517
References 521

# Chapter 14

# Internal Control in Computer-Based Information Systems

523

Organization of the Information Systems Function 526 Management Control of the Information Systems Function 532 Other General Controls 538 Application Controls 544

Summary 555
Review Questions 555
Discussion Questions 557
Problems and Cases 557
References 568

# Chapter 15

### Auditing of Computer-Based Information Systems

570

Scope and Objectives of Audit Work 573
An Overview of the Auditing Process 575

Internal Control Audits of Computer-Based Information Systems 577 Financial Audits and Computer Audit Software 594

Management Audits of Computer-Based Information Systems 602

Summary 603
Review Questions 604
Discussion Questions 606
Problems and Cases 606
References 612

#### **Part Five**

# Accounting Information Systems Applications 615

#### Chapter 16

# The Revenue Cycle: Sales and Accounts Receivable

617

The Marketing Management Function 619
The Sales Order Processing System 623
Computer-Based Sales Order Processing 635

Summary 646
Review Questions 647
Discussion Questions 648
Problems and Cases 649
References 664

# Chapter 17

### The Procurement Cycle: Purchases, Inventories, and Accounts Payable

665

and Accounts Payable

The Purchasing and Inventory Management

The Purchasing and Inventory Data Processing System 669

Computer-Based Purchasing and Inventory Data Processing 682

Summary 693 Review Ouestions 693

#### Contents

Discussion Questions 694 Problems and Cases 695 References 705

### Chapter 18

#### The Production Cycle

706

The Production Management Function 707
The Production Data Processing System 712
Computer-Based Production Data Processing 726

Summary 739
Review Questions 739
Discussion Questions 740
Problems and Cases 741
References 745

#### Chapter 19

#### The Personnel/Payroll Cycle

747

The Personnel Management Function 748
The Payroll Data Processing System 752
Computer-Based Payroll Data Processing 761

Summary 768
Review Questions 769
Discussion Questions 770
Problems and Cases 770
References 780

#### Chapter 20

#### The Finance Cycle: Cash Receipts and Disbursements, Capital Assets, and Financial Statements

781

The Financial Management Function 782
The Financial Data Processing System 786
Computer-Based Financial Information
Systems 803

Summary 817
Review Questions 818
Discussion Questions 819
Problems and Cases 819
References 829

### Glossary

G-1

Index

1.1