The Processing and Use of Metals 22

Population Expansion 22

Aksum (Axum) and Ethiopia 25
The Almoravid and the Almohad Empires 26
The Great Lakes Region and the East African Coast 26
West Africa 27
The Empires of Western Sudan 28
The Kanem-Bornu Empire 29
The Hausa States 29
The Islamic Caliphates of Sokoto, Masina, and Tukulor, and the Mandinka Empire 30
The Empires of the Forest and the Guinea Savanna Zones 30
Central and Southern Africa 32
North Africa and the Outside World 34
Hyksos, Phoenician, Roman, Greek, and Byzantine
North Africa, 34
Christian North Africa 35
Arab and Muslim North Africa 35
Ottoman North Africa 36
The Swahili Coast 36
The Trans-Saharan Trade 36
The Coming of (Western) Europeans and Early Colonies 38
The Slave Trades 39
The Atlantic Slave Trade 39
The Indian Ocean Slave Trade 40
Abolition and Effects of the Slave Trade 41
Christian Missionaries, "Legitimate" Trade, and the Mapping
of Africa 41
Christian Missionaries 41
Legitimate Trade and the Mapping of Africa 42
Box 2.1 Samuel White Baker's "Discovery" of the Albert Nyanza (Lake Albert) 42
Colonial Africa 43
Prelude to Colonialism 43
The Scramble for and the Partition of Africa 43
■ Box 2.2 Colonization of the Rhodesias 44
Colonial Administrative Policies and Systems 45
The Colonial Economy, 46

Reasons for the Independence Movement 50

The Nature of Colonialism 50

The Rise of African Nationalism 50
The Effects of the Two World Wars 50

North and East Africa 23
Ancient Egypt 24

Nubia 25

French Colonies 52 Belgian Colonies 53 Portuguese Colonies 53 South West Africa and Eritrea 54 The Struggle to End Apartheid 54	
South Sudan 55 The Ongoing Saga of Western Sahara 56	
Summary 56	
Postreading Assignment 57	
References 57	
The Struggle for a Better Standard of Living	59
Capitalist Ideology and Modernization Theories 60	
Marxist or Socialist Ideology and Dependency Theories 61	
The 1950s-1960s: From the Modernization Project to Mixed	
Development Strategies 63	
The 1970s: From Mixed Development Experiments to Economic	
Insolvency 66	
The 1980s: From Economic Insolvency to Structural Adjustment	
Programs 71	
The 1990s: Poststructural Adjustment Era 73	
Postreading Assignments 79	
References 80	
Tropical Climates 121 Seliming noticed	
Geology, Relief, and Drainage Basins	82
The Precambrian Time (4.6 b to 570 m years ago) 82	
The Paleozoic Era (570 m to 245 m years ago) 83	
The Mesozoic Era (245 m to 66.4 m years ago) 84	
The Cenozoic Era (About 66.4 m to the Most Recent) 84	
The Coastal Plains 87	
The Mediterranean Coast 87	
The Indian Coast 87	
The Indian Ocean and the Rea Sea Coasts 88	
The Interior Plateaus and Highlanas 88	
LOW Africa 89	
HIGH AIRCO 95	
River Basins 99 The Congo Basin 99	
THE CONOR DOSIN 99	

The March to Independence 51

British Colonies 51

The Nile Basin 102

The Chad Basin 103 The Niger Basin 104 The Zambezi Basin 105 The Orange Basin 105 Minor River Basins 106 Lakes 108 Lake Victoria 109 Lake Tanganyika 109 Lake Malawi (Nyasa) 110 Lake Albert 110 Lake Turkana (Lake Rudolf) 111 Lake Kivu 111 Other Lakes 112 Summary 112 Postreading Assignment 112 References 113 Climate, Biogeography, and Soils Factors Affecting Africa's Climate 116 Position, Latitude, and Shape 116 Distance from the Sea and Ocean Currents 117 Altitude 117 Air Masses 117 Temperature and Rainfall Conditions 119 Climatic Types 121 Tropical Climates 121 Desert Climates 126 Mediterranean (West Temperate) Climate 127 Tropical Rain Forest 128 Warm Temperate (Mediterranean) Forest 129 Tropical Woodland 130 Dry or Sudan Savanna 130 Semi-Desert or Sahel 130 Desert 131 Temperate Grassland 131 Mountain Vegetation Oxisols 132 Utisols 132 133 Alfisols

5

Aridisols

133

Other Soils 133 Nature's Opportunities 134 Limited Natural Hazards 134 Abundance of Mineral Wealth 134 Abundant Wildlife Habitat 134 Abundant Sunshine and Long Growing Season 135 Nature's Challenges 135 Unequal Distribution of Natural Resources 135 Climate Change 135 Desertification 139 Summary 143 Postreading Assignments 143 References 144 **Population** 146 Distribution by Density 147 Population Density 147 Rural-Urban Distribution 149 Factors Affecting Population Distribution 150 Physical Environmental Factors 150 Human Factors 152 Age and Sex Composition 153 Age 153 Sex 155 Population Pyramids 155 Income, Education Attainment, and Life Expectancy at Birth 155 Population Growth 158 Natural Increase 159 Net Migration 167 Causes of International Migration 172 Population Growth (Natural Increase) and Economic Development 174 Rapid Population Growth and Africa's Economic Development 175 Migration and Development 176 Migration as a Positive Factor in Africa's Development 176 Migration as a Negative Factor to Africa's Development 177

Vertisols 133

Summary 178

References 180

Postreading Assignment 179

Ethnocentrism 184

Christianity and Islam 185

Colonialism 185

Postcolonial Policies and Realities 186

Globalization 186

Race and Ethnicity 187

Racial Groups 187

Ethnic groups 188

Religions and Worldviews 191

Indigenous African Religions and Worldviews 192

Christianity 193

Box 7.1 | William Wade Harris: An African Prophet 194

Box 7.2 | Simon Kimbangu: African Envoy of Jesus Christ 195

Islam 198

■ Box 7.3 | Shehu Usuman dan Fodio—Commander of the Faithful 199

Languages 200

The Niger-Congo Family 201

The Afro-Asiatic Family 202

The Nilo-Saharan Family 203

The Khoisan Family 203

European Languages and Lingua Franca 203

Literature 203

Oral Literature 203

Written Literature 204

Visual Art and Symbolism 205

Woodwork 205

Stonework 207

Beadwork 207

Rock and Wall Painting and Body Decorations 209

Metalwork 209

Weaving and Textile Printing 209

Family and Kinship 211

Marriage 211

Children 213

Kinship 214

Age, Sex, and Gender 214

Age 214

Sex and Gender Roles 215

The Problem of Female Genital Mutilation (FGM) 216

Cuisines 217
Dress and Adornment 219
Social Relations and Lifestyle 220
Lifecycle Celebrations 220
Music, Entertainment, and Sports 221
Language and Development 222
Oral Literature and Corruption 222
Ethnicity and Conflicts 223
Religious Fundamentalism and Extremism 223
Summary 224
Postreading Assignments 225
References 225

Evolution and Development of Africa's Urban System

8 Cities, Towns, and Villages

228

Precolonial Period (before 1850) 230 Colonial Period (1850s-1950s) 235 Postcolonial Period (since 1960s) 238 The Internal Structure of Africa's Cities 241 Spatial Structure 241 Social Structure 245 Economy Composition 247 Problems and Issues of Africa's Postcolonial City 248 Rapid Urbanization and Urban Primacy 248 Urban Governance and Management 249 Housing 250 Transportation and Mobility 251 Sanitation and Environmental Health 252 Criminal Violence and Urban Youth 253 Evolution and Development of Rural Settlements 254 Internal Structure of Rural Settlements 255 Spatial Structure 255 Social Structure and Economy Composition 256 Social Linkages and Interaction 256 Economic Linkages and Interactions 257 Political Linkages and Interactions 258 Summary 258 Postreading Assignments 259 References 259

Precolonial Africa 264

Centralized Political System 264

Decentralized Political Systems 265

Colonial Africa 265

Postcolonial Africa 266

From Multiparty Rule to Single-Party Rule 267

The Military Interregnum 1950s-1990s 269

Return to Multiparty Politics 271

Boundary Disputes 280

The Land Question 281

Box 9.1 | Zimbabwe's Land Question 283

Democratic Multiparty Elections 284

■ Box 9.2 | Ghana's 2008 Election 286

Civil Society, Citizen Representation, and Accountability 287

Rule of Law and Access to Justice 288

Neopatrimonialism, Venality, and Corruption 289

Civil Wars 291

Political Ideology and Personal Rivalries 291

Ethnicity 293

Economic and Political Decay 294

Control Over Resources 295

External Influences 295

Ethnic and Minority Issues 296

Box 9.3 | The Amazigh (Berber) Spring 298

Women Issues 299

The Media and Press Freedom 299

The Problem of Local Government Reforms 300

Regional Groupings and Changing Geopolitics 301

Summary 303

Postreading Assignments 303

References 304

10 Transportation and Communication

308

Road Transportation 309

Precolonial Trails and Roads 309

Colonial Roads 309

Postcolonial Roads 310

The Contemporary Road Network 310

Organization of Road Transport Service 311

Problems and Issues in Road Transportation 313

Water Transportation—Inland Waterways and Ocean Transportation 316 Precolonial Period 316 Colonial Period 317 Postcolonial Period 317 Contemporary Water Transportation Network 319 Problems and Issues of Africa's Water Transportation 320 Rail Transportation 327 Colonial Rail 327 Postcolonial Developments 327 Contemporary Rail Network 329 Organization of Rail Service in Africa 330 Problems and Issues of Rail Transportation 331 Air Transportation 333 Colonial Air Transport 333 Postcolonial Developments 334 Organization and Performance of Air Transportation Service 336 Problems and Issues of Air Transportation 340 Telecommunication in Precolonial and Colonial Periods 344 Postcolonial Developments 345

Infrastructure Development 345
Privatization 349

Regulatory Efforts 349

Contemporary Telecommunication Services in Africa 350 Telecommunication and Development of Africa 354

Summary 355
Postreading Assignment 355
References 356

11 Agriculture

358

Precolonial Africa 358 Colonial Africa 360

The Expansion of European Farming System 360
The Expansion and Institution of Commercial Agriculture 361

The Establishment of Agricultural Research 364

The Decline of Food Production 364

Postcolonial Africa 365

Large-scale Agriculture 365

Irrigation Schemes 365

Planned Resettlement Schemes 366

Focus on Small Farmers and Integrated Rural Development 367

Structural Adjustments and Agricultural Liberalization 367

Box 11.1 | The Ethiopian Famine of 1982 368

Decline of Agricultural Research 370

The State of Africa's Agriculture by the Beginning of the 21st century 370

The New Partnership for Africa's Development (NEPAD)'s agricultural program 371

Renewed calls for a Green Revolution in Africa 373

Crop Production Systems 374

Traditional Crop Production Systems 374

Modern Crop Production System 375

Major Crops 375

Livestock Production Systems 389

Nomadic System 389

Permanent System 390

Major Stock 391

Low Productivity 395

The Problem of Institutions and Markets 396

Disempowered Farmers and Communities 397

A Note on Food Insecurity 398

Policy Options 398

Raising Agricultural Productivity 398

Agricultural Research, Rural Infrastructure, and Institutional Reforms 399

The Need for Agricultural Revolution 399

Postreading Assignment 401

References 402

12 Fisheries and Forestry

Classification of Fisheries, Fishing Vessels and Methods, and Fisheries Data 406

Classification of Fisheries 406

Fishing Methods and Vessels 406

Fisheries Data 406

Evolution and Development of African Fisheries 408

Precolonial Period 408

Colonial Period 410

Postcolonial Period 411

Fisheries Production 415

Marine Capture Fisheries 415

Inland Capture Fisheries 422

Culture Fisheries or Aquaculture 422

405

Problems and Issues in Fisheries 425

Problems and Issues of Capture Fisheries 425

Problems and Issues of Culture Fisheries 427

Summary 427

Evolution and Development of African Forestry 428

Precolonial Period 428

Colonial Period 429

Postcolonial Period 432

Production of Forest Products 438

Types of Forest Products 438

Forest Products Operations 439

Production Trends 439

Problems and Issues in Africa's Forestry 442

Population Growth, Urbanization, and the Dry Forest 442

Low Government Priority and Overreliance

on Foreign Capital 442

Low Value Addition 443

Weak Governance 443

Illegal Logging and Corruption 443

Forest Conflicts 444

Climate Change and the Role of NGOs 444

Summary 445

Postreading Assignment 446

References 446

13 Mineral and Energy Production

449

Evolution and Development of Mineral Production in Africa 451

Precolonial Period 451

Colonial Period 451

Postcolonial Period 453

- Box 13.1 | The Rise and Fall of State-Owned Mining Operations: The Experience of Africa's Copperbelt 454
- Box 13.2 | Mineral Sector Reforms in the Democratic Republic of Congo 457

Mineral Production Operations 459

Industrial or Large-Scale Mineral Production (IMP) 459

Artisanal Mineral Production (AMP) 460

Distribution and Production of Major Minerals 461

The Evolution and Development of Energy Production in Africa 471

Precolonial Period 471

Colonial Period 472

Postcolonial Period 473

Distribution of Major Energy Resources and Production 475
Primary Energy Resources and Production 475
Secondary Energy Production 482
Problems and Issues in Mineral and Energy Production 482
Physical and Human Impact of Mineral and Energy
Production 482
Mineral Production, Conflict, and Development 484
Summary 487
Postreading Assignment 488
References 488

14 Manufacturing Activities

490

Precolonial Africa 491 Colonial Africa 491 Postcolonial Africa 492

Import-Substitution Industrialization (ISI) Policy 492
Structural Adjustment Programs (SAPs) and Export-Led
Industrialization 494

The UNIDO and UNCTAD Report on African Industrialization 495
Manufacturing Production Systems (MPS) of Africa 497
Indigenous Manufacturing Production System 498
Small-Scale Manufacturing Production System 498

Box 14.1 | The Small-Scale Palm Oil Industry in Ghana 499

Large-Scale Manufacturing Production Systems 499 Major Manufacturing Industries 499

The Aluminum Industry 500

The Automotive Industry 507

The Chemical Industry 510

The Forest Products Industry 511

The Iron and Steel Industry 513

The Metallurgical Industry 515

Petroleum refinery 517

The Pharmaceutical Industry 518

Food and Beverage Processing 519

The Computer and Electronics Industry 522

The Leather Goods Industry 523

The Textile and Garment Industry 524

Problems and Prospects of Industrialization 528

Political Instability and Leadership 528

Lack of Sustained Industrialization Policy 529

Low Value Addition 529

Weak inter- and Intrasectoral Linkages 530

High Dependence of Foreign Capital 530
Weak Supporting Infrastructure 530
Prospects for Industrialization 530
Summary 531
Postreading Assignments 533
References 533

15 Trade and Tourism

535

Evolution and Development of Trade in Africa 535
Precolonial Africa 535
Colonial Africa 537
Postcolonial Africa 539
Transported Oppositions of Tradition Activities 545

Types and Organization of Trading Activities 545
Internal or Domestic Trade 545
External or International Trade 546

Africa's Trade Issues 556 Challenges 557 Recommendations 559

The Evolution and Development of Tourism in Africa 561
Precolonial Africa 561
Colonial Africa 562
Postcolonial Africa 563

Africa's Tourist Trade 566

The Role of Tourism in African Economies 566
Composition and Volume of Africa's Tourist Trade 570
Purpose and Types of International Tourism 572
Tourism and Economic Development of Africa 575

Prospects 575
Constraints 576
Postreading Assignments 577
References 578

16 Education and Health Care

581

Evolution and Development of Education in Africa 582
Precolonial Africa 582
Colonial Africa 584
Postcolonial Africa 586
Africa's Education System 591
Primary Education 591
Secondary Education 593

High Dependence of Foreign Capital 530
Weak Supporting Infrastructure 530
Prospects for Industrialization 530
Summary 531
Postreading Assignments 533
References 533

15 Trade and Tourism

535

Evolution and Development of Trade in Africa 535
Precolonial Africa 535
Colonial Africa 537
Postcolonial Africa 539

Types and Organization of Trading Activities 545
Internal or Domestic Trade 545
External or International Trade 546

Africa's Trade Issues 556
Challenges 557
Recommendations 559

The Evolution and Development of Tourism in Africa 561
Precolonial Africa 561
Colonial Africa 562

Postcolonial Africa 563

Africa's Tourist Trade 566

The Role of Tourism in African Economies 566
Composition and Volume of Africa's Tourist Trade 570
Purpose and Types of International Tourism 572

Tourism and Economic Development of Africa 575
Prospects 575

Constraints 576
Postreading Assignments 577
References 578

16 Education and Health Care

581

Evolution and Development of Education in Africa 582
Precolonial Africa 582
Colonial Africa 584
Postcolonial Africa 586
Africa's Education System 591
Primary Education 591
Secondary Education 593

Tertiary Education 594

Educational Attainment and Participation 595

Problems and Issues in Africa's Education System 601

Financing and Education Policy 601

Accessibility 601

Social Inequities 602

Affordability 602

Resources, Quantity, and Quality Issues 602

Summary 604

Evolution and Development of Africa's Health-Care Systems 605

Precolonial Africa 605

Colonial Africa 607

Postcolonial Africa 610

Disease Ecology, Morbidity, and Mortality in Africa 613

Endemic Diseases of Africa 613

Causes of Death 620

Improved Drinking Water and Sanitation 622

Africa's Health-Care Delivery System 623

The Modern Medicine Sector 624

The Traditional Medicine Sector 626

The Faith Healing Sector 627

Problems and Issues in Africa's Health-Care System 629

Financing 629

Policy 634

Inadequate Facilities, Human Resources, and Service 634

Spatial and Social Inequities in Health-Care Service 635

Drug Shortages and Fake Drugs 638

Summary 638

Postreading Assignment 639

References 639

Index