Contents

Introduction xxxi
Assessment Test xxxvii

Part 1 Operational Support and Analysis 1

Chapter 1 Introduction to Operational Support and Analysis 3
Understanding the Purpose, Objectives, and Value of the Operational Support and Analysis Processes 4
The Purpose of Operational Support and Analysis Processes 6
The Objectives of Operational Support and Analysis Processes 6
The Scope of Operational Support and Analysis Processes 7
The Value Operational Support and Analysis Processes Deliver to the Business 7
How Service Operation Provides Business Value 8
The Context of Service Operation, the Operational Support and Analysis Processes, and the Service Lifecycle 9
Service Strategy 10
Service Design 11
Service Transition 12
Service Operation 12
Continual Service Improvement 13
Optimizing Service Operation Performance 13

Chapter 2 Incident and Problem Management 25
Incidents and Problems: Two Key Service Management Concepts 26
Incident Management 27
The Purpose of Incident Management 28
The Objectives of Incident Management 28
The Scope of Incident Management 28
The Value of Incident Management to the Business
and to the Service Lifecycle 29
Incident Management Policies 30
Principles and Basic Concepts for Incident Management 31
Incident Management Process Activities, Methods,
and Techniques 34
Incident Management Triggers, Inputs, and Outputs 41
Interfaces between Incident Management and the
Lifecycle Stages 42
Information Management within the Incident
Management Process 44
Roles within Incident Management 45
Challenges and Risks 47
Critical Success Factors and Key Performance Indicators 48
Problem Management 49
Purpose 50
Objectives 50
Scope 50
The Value of Problem Management to the Business and
to the Service Lifecycle 51
Policies, Principles, and Basic Concepts 51
Process Activities, Methods, and Techniques 54
Error Detection in Development Environments 63
Triggers, Inputs, Outputs, and Interfaces 64
Information Management in the Problem Management
Process 66
Roles in Problem Management 67
Challenges and Risks 68
Critical Success Factors and Key Performance Indicators 69
Summary 70
Exam Essentials 71
Review Questions 73

Chapter 3 Event Management, Request Fulfillment, and
Access Management 75
Event Management 76
Purpose 77
Objectives 77
Scope 78
Value 79
Policies 79
Principles and Basic Concepts 79
Process Activities, Methods, and Techniques 83
Chapter 4  The Service Desk  125

Role  127
Objective  127

Service Desk Organizational Structures  128
  Local Service Desk  128
  Centralized Service Desk  129
  Virtual Service Desk  131
Follow the Sun 132
Specialized Service Desk Groups 133
Service Desk Single Point of Contact 133
Service Desk Staffing 134
  Training 137
  Staff Retention 137
  Super Users 137
Measuring Service Desk Performance 138
  Service Desk Environment 141
  Outsourcing the Service Desk 141
Summary 143
Exam Essentials 143
Review Questions 144

Chapter 5 Technical Management, Application Management, and IT Operations Management 147
ITIL Functions 148
Technical Management 148
  Role 149
  Objectives 149
  Generic Technical Management Activities 150
  Technical Management Organization 152
  Technical Design and Technical Maintenance and Support 152
  Measuring Technical Management Performance 152
  Technical Management Documentation 154
IT Operations Management 154
  IT Operations Control 155
  Facilities Management 155
  Objectives 156
  Measuring IT Operations Management Performance 158
  IT Operations Management Documentation 158
Applications Management 159
  Role 160
  Objectives 161
  Application Management Principles 161
  Application Management Lifecycle 162
  Requirements 163
  Design 163
  Build 164
  Deploy 164
  Operate 164
Optimize 165
Application Management Generic Activities 165
Application Development vs. Application Management 168
Measuring Application Management Performance 171
Application Management Documentation 172
Technical and Application Management Roles 175
IT Operations Management 175
Summary 176
Exam Essentials 176
Review Questions 178

Chapter 6 Technology and Implementation Considerations for Operational Support and Analysis 181

Service Management Tools 182
Tool Requirements for Service Operation Processes 184
   Event Management 184
   Incident Management 184
   Request Fulfillment 185
   Problem Management 185
   Access Management 185
   Service Desk Function 186
Service Management Tool Choice 187
Service Operation and Project Management 188
Assessing and Managing Risk in Service Operation 188
   Risks Resulting from Changes 188
   Other Sources of Risk 189
Operational Staff in Design and Transition 189
Planning and Implementing Service Management Technologies 190
   Licenses 190
   Deployment 191
Service Operation Challenges 192
   Engagement with Development and Project Staff 192
   Justifying Funding 193
   Differing Service Design and Service Operation Focus and Priorities 193
   Other Challenges 194
   Management of Staff 194
Critical Success Factors 195
Service Operation Risks 196
Summary 197
Exam Essentials 197
Review Questions 199
Part II Planning, Protection, and Optimization

Chapter 7 Introduction to Planning, Protection, and Optimization

The Purpose, Objectives, and Value of Service Design
  The Purpose of Service Design
  The Goals and Objectives of Service Design
  The Value Service Design Delivers to the Business
The Context of Service Design and the Service Lifecycle
  Service Strategy
  Service Design
  Service Transition
  Service Operation
  Continual Service Improvement
Service Design Basics
  Service Design and Business Change
  The Four Ps of Service Design
  Holistic and Balanced Service Design
  A Structured Approach to Service Design
  The Five Aspects of Service Design
  The Service Design Package
The Interfaces of Design Coordination with Other Processes Related to PPO
Summary
Exam Essentials
Review Questions

Chapter 8 Capacity, Availability, and Information Security Management

Capacity Management
  Purpose of Capacity Management
  Objectives of Capacity Management
  Scope of Capacity Management
  Capacity Management Value to the Business
  Capacity Management Policies, Principles, and Basic Concepts
  Capacity Management Process Activities, Methods, and Techniques
  Capacity Management Triggers, Inputs, and Outputs and Interfaces
  Information Management and Capacity Management
  Process Roles
  Critical Success Factors and Key Performance Indicators for Capacity Management
  Challenges for Capacity Management
  Risks for Capacity Management
Availability Management 238
  Defining Availability 238
  Purpose of Availability Management 239
  Objectives of Availability Management 239
  Scope of Availability Management 240
  Availability Management Policies 241
  Availability Management Principles and Basic Concepts 241
  Availability Management Process, Methods, and Techniques 248
  Availability Management Triggers, Inputs, Outputs, and Interfaces 253
  Information Management in Availability Management 256
  Availability Management Process Roles 257
  Availability Management Critical Success Factors and Key Performance Indicators 259
  Availability Management Challenges and Risks 259

Information Security Management 260
  Purpose of Information Security Management 261
  Objectives of Information Security Management 261
  Scope of Information Security Management 261
  Information Security Management Value to the Business 262
  Information Security Management Policies 262
  IT Security Management Process Activities, Methods, and Techniques 264
  Information Security Management Triggers, Inputs, and Outputs 267
  Information Security Management Interfaces 269
  Information Management in Information Security 270
  Information Security Process Roles 270
  Critical Success Factors and Key Performance Indicators for Information Security Management 271
  Challenges for Information Security Management 272
  Risks for Information Security Management 272

Summary 273
Exam Essentials 273
Review Questions 275

Chapter 9 IT Service Continuity Management and Demand Management 277
IT Service Continuity Management 278
  Purpose of IT Service Continuity Management 278
  Objectives of IT Service Continuity Management 279
  Scope of IT Service Continuity Management 279
  IT Service Continuity Management Value to the Business 280
  IT Service Continuity Management Process, Methods, and Techniques 280
<table>
<thead>
<tr>
<th>Chapter</th>
<th>Technology and Implementation Considerations for Planning, Protection, and Optimization</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Generic Requirements and Evaluation Criteria for Technology</td>
</tr>
<tr>
<td></td>
<td>Good Practices for Practice and Process Implementation</td>
</tr>
<tr>
<td></td>
<td>Service Management Tool Choice</td>
</tr>
<tr>
<td></td>
<td>Planning and Implementing Service Management</td>
</tr>
<tr>
<td></td>
<td>Technologies</td>
</tr>
<tr>
<td></td>
<td>Licenses</td>
</tr>
<tr>
<td></td>
<td>Deployment</td>
</tr>
<tr>
<td></td>
<td>Designing Technology Architectures</td>
</tr>
<tr>
<td>Summary</td>
<td></td>
</tr>
<tr>
<td>Exam Essentials</td>
<td></td>
</tr>
<tr>
<td>Review Questions</td>
<td></td>
</tr>
</tbody>
</table>
### Part III: Release, Control, and Validation

#### Chapter 11: Introduction to Release, Control, and Validation

<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Transition Concepts</td>
<td>328</td>
</tr>
<tr>
<td>Purpose</td>
<td>328</td>
</tr>
<tr>
<td>Objectives</td>
<td>328</td>
</tr>
<tr>
<td>Scope</td>
<td>329</td>
</tr>
<tr>
<td>Value to the Business</td>
<td>331</td>
</tr>
<tr>
<td>Development of a Service Transition Strategy</td>
<td>332</td>
</tr>
<tr>
<td>Service Transition Lifecycle Stages</td>
<td>334</td>
</tr>
<tr>
<td>Preparation for Service Transition</td>
<td>334</td>
</tr>
<tr>
<td>Planning and Coordinating Service Transition Activities</td>
<td>335</td>
</tr>
<tr>
<td>Provide Transition Process Support</td>
<td>336</td>
</tr>
<tr>
<td>Summary</td>
<td>337</td>
</tr>
<tr>
<td>Exam Essentials</td>
<td>337</td>
</tr>
<tr>
<td>Review Questions</td>
<td>338</td>
</tr>
</tbody>
</table>

#### Chapter 12: Change Management and Service Asset and Configuration Management

<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change Management</td>
<td>342</td>
</tr>
<tr>
<td>The Purpose of Change Management</td>
<td>342</td>
</tr>
<tr>
<td>The Objectives of Change Management</td>
<td>343</td>
</tr>
<tr>
<td>The Scope of Change Management</td>
<td>343</td>
</tr>
<tr>
<td>The Value of Change Management to the Business</td>
<td>345</td>
</tr>
<tr>
<td>Change Management Policies and Principles</td>
<td>346</td>
</tr>
<tr>
<td>Change Management Basic Concepts</td>
<td>347</td>
</tr>
<tr>
<td>Change Management Process Activities, Methods, and Techniques</td>
<td>353</td>
</tr>
<tr>
<td>Triggers</td>
<td>363</td>
</tr>
<tr>
<td>Inputs</td>
<td>364</td>
</tr>
<tr>
<td>Outputs</td>
<td>365</td>
</tr>
<tr>
<td>Interfaces</td>
<td>365</td>
</tr>
<tr>
<td>Information Management: The Role of the Configuration Management System</td>
<td>366</td>
</tr>
<tr>
<td>Change Management Process Roles</td>
<td>366</td>
</tr>
<tr>
<td>Critical Success Factors and Key Performance Indicators</td>
<td>368</td>
</tr>
<tr>
<td>Challenges</td>
<td>369</td>
</tr>
<tr>
<td>Risks</td>
<td>369</td>
</tr>
<tr>
<td>Service Asset and Configuration Management</td>
<td>369</td>
</tr>
<tr>
<td>Purpose</td>
<td>370</td>
</tr>
<tr>
<td>Objectives</td>
<td>370</td>
</tr>
<tr>
<td>Scope</td>
<td>370</td>
</tr>
<tr>
<td>Value to Business</td>
<td>371</td>
</tr>
<tr>
<td>Policies and Principles</td>
<td>371</td>
</tr>
</tbody>
</table>
Chapter 13 Service Validation and Testing and Change Evaluation

Service Validation and Testing

Purpose 394
Objective 394
Scope 395
Value to the Business 395
Policies, Principles, and Basic Concepts 395
Test Models and Testing Perspectives 396
Process Activities, Methods, and Techniques 400
Trigger 401
Inputs 402
Outputs 402
Interfaces 402
Service Validation and Testing Process Roles 402
Information Management 403
Critical Success Factors and Key Performance Indicators 404
Challenges 404
Risks 405

Change Evaluation

Purpose 405
Objectives 405
Scope 406
Value to the Business 406
Policies, Principles, and Basic Concepts 406
Trigger 410
Inputs 411
Outputs 411
Interfaces 411
Information Management 411
Change Evaluation Process Roles 412
Critical Success Factors and Key Performance Indicators
Challenges
Risks
Summary
Exam Essentials
Review Questions

Chapter 14 Release and Deployment Management and Knowledge Management

Release and Deployment Management
Purpose
Objectives
Scope
Value to the Business
Policies, Principles, and Basic Concepts
Process Activities, Methods, and Techniques
Triggers
Inputs
Outputs
Interfaces
Process Roles and Responsibilities
Information Management
Critical Success Factors and Key Performance Indicators
Challenges
Risks

Knowledge Management
Purpose
Objectives
Scope
Value to the Business
Policies, Principles, and Basic Concepts
Process Activities, Methods, and Techniques
Triggers
Inputs
Outputs
Interfaces
Knowledge Management Roles
Information Management
Critical Success Factors and Key Performance Indicators
Challenges
Risks
CSI and Knowledge Management
Summary
Exam Essentials
Review Questions
Chapter 15  Technology and Implementation Considerations for Release, Control, and Validation 453

Generic Requirements for Integrated ITSM Technology 454
Evaluation Criteria for Service Management Tools 455
Release, Control, and Validation Practices for Managing Change in Service Operation 456
Change Triggers 457
Change Assessment 457
Measurement of Successful Change 458
Service Operation and Project Management 458
Service Transition Challenges 458
Critical Success Factors 459
Assessing and Managing Risk in Service Operation 460
    Risks Resulting from Changes 461
    Other Sources of Risk 461
Operational Staff in Design and Transition 462
Planning and Implementing Service Management Technologies 462
    Licenses 463
    Deployment 463
Technology Considerations for Implementing Knowledge Management, Collaboration, and the CMS 464
    Knowledge Management Tools 465
    Collaboration 466
    Configuration Management 467
Summary 468
Exam Essentials 469
Review Questions 470

Part IV  Service Offerings and Agreements 473

Chapter 16  Introduction to Service Offerings and Agreements 475

The SOA Processes from Strategy and Design and the Context in the Service Lifecycle 476
    Service Strategy 476
    Service Design 483
Utility and Warranty and the Relevance to the SOA Processes 487
    Value 487
    Utility and Warranty 490
Understanding and Identifying Customer Requirements 492
    Business Requirements and Drivers 493
Return on Investment and the Business Case 495
    Return on Investment 495
    Business Case 497
### Chapter 17  
**Service Portfolio Management and Service Catalog Management**

#### Understanding Service Portfolio Management
- **Purpose** 502
- **Objectives** 502
- **Scope** 503
- **Value** 505
- **Policies, Principles, and Basic Concepts** 505

#### Service Portfolio Management through the Service Lifecycle
- **Process Activities, Methods, and Techniques** 512
- **Triggers** 517
- **Inputs** 518
- **Outputs** 518
- **Interfaces** 518
- **Information Management** 519
- **Roles and Responsibilities** 520
- **Critical Success Factors and Key Performance Indicators** 521
- **Challenges** 521
- **Risks** 522

#### Service Catalog Management
- **Purpose** 522
- **Objectives** 523
- **Scope** 523
- **Value** 524
- **Policies** 524
- **Principles and Basic Concepts** 524
- **Process Activities, Methods, and Techniques** 526
- **Triggers, Inputs, Outputs, and Interfaces** 527
- **Information Management** 528
- **Roles and Responsibilities** 529
- **Critical Success Factors and Key Performance Indicators** 530

#### Summary
- 531

### Chapter 18  
**Service Level Management and Supplier Management**

#### Service Level Management
- **Purpose of Service Level Management** 536
- **Objectives of Service Level Management** 537
**Contents**

Scope of Service Level Management .......................................................... 538  
Service Level Management Value to the Business ......................................... 538  
Service Level Management Policies, Principles, and Basic Concepts .............. 540  
Service Level Management Process Activities, Methods, and Techniques ........ 544  
Service Level Management Triggers, Inputs, and Outputs ............................ 546  
Service Level Management Interfaces ....................................................... 548  
Information Management and Service Level Management .......................... 548  
Service Level Management Process Roles ................................................. 549  
Critical Success Factors and Key Performance Indicators for Service Level Management .......................................................... 551  
Challenges for Service Level Management .................................................. 552  
Risks for Service Level Management .......................................................... 552  
Supplier Management .................................................................................... 552  
Purpose of Supplier Management .................................................................. 553  
Objectives of Supplier Management .............................................................. 553  
Scope of Supplier Management ...................................................................... 553  
Supplier Management Value to the Business ............................................... 554  
Supplier Management Principles, Policies, and Basic Concepts ...................... 554  
Supplier Management Process, Methods, and Techniques ............................. 558  
Supplier Management Triggers, Inputs, and Outputs ...................................... 559  
Supplier Management Interfaces ................................................................. 561  
Information Management ............................................................................. 561  
Supplier Management Process Roles ............................................................ 561  
Supplier Management Critical Success Factors and KPIs .............................. 563  
Supplier Management Challenges and Risks ............................................... 563  
Summary ......................................................................................................... 564  
Exam Essentials .............................................................................................. 564  
Review Questions ............................................................................................ 566

**Chapter 19**  
**Business Relationship Management and Financial Management for IT** .......................................................... 569  
Business Relationship Management ................................................................ 570  
Purpose of Business Relationship Management ........................................... 570  
Objectives of Business Relationship Management ........................................ 571  
Scope of Business Relationship Management ................................................ 571  
Value .............................................................................................................. 574  
Policies, Principles, and Basic Concepts ......................................................... 575  
Process Activities, Methods, and Techniques ................................................ 576  
Triggers ............................................................................................................ 579
Chapter 20  Technology Considerations for Service Offerings and Agreements  599

Generic Requirements and Evaluation Criteria for Technology  600
Good Practices for Practice and Process Implementation  602
Challenges, Critical Success Factors, and Risks  604
Service Management Tool Choice  605
Planning and Implementing Service Management Technologies  606
Licenses  606
Deployment  607
Summary  608
Exam Essentials  608
Review Questions  610
Appendix

Answers to Review Questions

Chapter 1: Introduction to Operational Support and Analysis 614
Chapter 2: Incident and Problem Management 614
Chapter 3: Event Management, Request Fulfillment, and Access Management 615
Chapter 4: The Service Desk 616
Chapter 5: Technical Management, Application Management, and IT Operations Management 618
Chapter 6: Technology and Implementation Considerations for Operational Support and Analysis 618
Chapter 7: Introduction to Planning, Protection, and Optimization 619
Chapter 8: Capacity, Availability, and Information Security Management 621
Chapter 9: IT Service Continuity Management and Demand Management 622
Chapter 10: Technology and Implementation Considerations for Planning, Protection, and Optimization 623
Chapter 11: Introduction to Release, Control, and Validation 623
Chapter 12: Change Management and Service Asset and Configuration Management 624
Chapter 13: Service Validation and Testing and Change Evaluation 625
Chapter 14: Release and Deployment Management and Knowledge Management 626
Chapter 15: Technology and Implementation Considerations for Release, Control, and Validation 627
Chapter 16: Introduction to Service Offerings and Agreements 628
Chapter 17: Service Portfolio Management and Service Catalog Management 629
Chapter 18: Service Level Management and Supplier Management 630
Chapter 19: Business Relationship Management and Financial Management for IT 630
Chapter 20: Technology Considerations for Service Offerings and Agreements 631

Index 633