

№	Job Category	Skill Category	Skill Item		Knowledge Item		Specialty Field																																				
							Marketing			Sales		Consultant		IT Architect		Project Management		IT Specialist					Application Specialist		Software Development		Customer Service		IT Service Management			Education											
			Common Skill Item	Specialty Field Specific Skill Item	Knowledge Item (Middle Item)	Knowledge Item (Minor Item)	Marketing Management	Sales Channel Strategy	Market Communication	Consulting Sales by Visiting Customers	Product Sales by Visiting Customers	Sales via Media	Industry	Business Function	Application Architecture	Integration Architecture	Infrastructure Architecture	Systems Development	IT Outsourcing	Network Service	Software Product Development	Platform	Network	Database	Common Application Infrastructure	Systems Management	Security	Business Application System	Business Application Package	Operating System	Middleware	Application Software	Hardware	Software	Facility Management	Operations Management	System Operation	Operation	Service Desk	Training Planning	Instructions		
1	All Job Categories	Project Management	Project Management		-Project Integration Management	•Develop Project Charter •Develop Preliminary Project Scope Statement •Develop Project Management Plan •Direct and Manage Project Execution •Monitor and Control Project Work •Integrated Change Control •Close Project	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		
2-a	All Job Categories	Project Management	Project Management		-Project Scope Management	•Scope Planning •Scope Definition •Create WBS •Scope Verification •Scope Control	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		
2-b	All Job Categories	Project Management	Project Management		-Project Time Management	•Activity Definition •Activity Sequencing •Activity Resource Estimating •Activity Duration Estimating •Schedule Development •Schedule Control	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		
2-c	All Job Categories	Project Management	Project Management		-Project Cost Management	•Cost Estimating •Cost Budgeting •Cost Control	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
3	All Job Categories	Project Management	Project Management		-Project Quality Management	•Quality Planning •Perform Quality Assurance •Perform Quality Control	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
4	All Job Categories	Project Management	Project Management		-Project Human Resource Management	•Human Resource Planning •Acquire Project Team •Develop Project Team •Manage Project Team	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
5	All Job Categories	Project Management	Project Management		-Project Communications Management	•Communications Planning •Information Distribution •Performance Reporting •Manage Stakeholders	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
6	All Job Categories	Project Management	Project Management		-Project Risk Management	•Risk Management Planning •Risk Identification •Qualitative Risk Analysis •Quantitative Risk Analysis •Risk Response Planning •Risk Monitoring and Control	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
7	All Job Categories	Project Management	Project Management		-Project Procurement Management	•Plan Purchases and Acquisitions •Plan Contracting •Request Seller Responses •Select Sellers •Contract Administration •Contract Closure	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
8	All Job Categories	Personal	Leadership		-Leadership	•Fundamentals and Principles of Leadership •Teamwork and Communication •Project Objective Setting •Project Promotion •Project Execution •Project Management •Collaboration Between Team Members •Motivating Team Members and Provision for Feelings of Accomplishment	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
9	All Job Categories	Personal	Communication		-2-Way Communication	•Dialogue and Interview •Information Transfer •Communication Technique •Effective Speaking and Listening	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
10	All Job Categories	Personal	Communication		-Transmission of Information	•Presentation Technique •Creation of Official and Non-official Documents •Technical Writing •Media Selection •Persuasion Technique	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
11	All Job Categories	Personal	Communication		-Organization, Analysis and Retrieval of Information	•Development and Practice of Status Response Capabilities to Understand Situations •Capabilities to Understand Situations •Meeting Management Techniques	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x

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12	All Job Categories	Personal	Negotiation		-Negotiation	•Negotiation Process •Effective Negotiation Techniques •Establishment of Trust Relationship •Objective Setting •Common Interest •Logical Thinking •Problem Solving Techniques	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
13	Marketing	Methodology	Compliance		-Knowledge of Relevant Regulations	•Relevant Regulations •Accepted Norms	x	x	x																															
14	Marketing	Methodology	Assessment and Selection of Market Opportunities		-Discovery and Selection of Market Opportunities	•Analysis of Marketing Environments •Discovery of Market Opportunities and Threats •Market Research and Measurement of Market Demands	x	x	x																															
15	Marketing	Methodology	Assessment and Selection of Market Opportunities		-Market Research Concept and Methodology	•Market Definition •Understanding of Whole Market •Market Analysis •Setting of Market Research Objective •Creation of Market Research Plan •Market Research Design •Market Research Implementation •Verification of Hypotheses	x	x	x																															
16	Marketing	Methodology	Assessment and Selection of Market Opportunities		-Market Analysis	•Macro Environment Analysis •Customer Analysis •Competition Analysis •Analysis of Internal Environments (Analysis of Company's Strengths and Weaknesses) •Analysis of Market Opportunities •Measurement of Market Demand	x	x	x																															
17	Marketing	Methodology	Assessment and Selection of Market Opportunities		-Market Segmentation	•Concepts •Application and Practice of Quantitative Methodology •Understanding and Setting of Markets and Market Segments •Market Segmentation (Geographical Variance, Demographic Variance, Psychological Variance, Behavioral Variances, etc.) •Evaluation of Market Segments •Selection of Market Segments	x	x	x																															
18	Marketing	Methodology	Assessment and Selection of Market Opportunities		-Selection of Target Market (Targeting)	•Market Scale •Analysis of Company's Advantages •Analysis for Life Cycle Phases of Products or Service •Analysis of Entry Barriers •Analysis of Competitive Strategies •Analysis of Environmental Factors	x	x	x																															
19	Marketing	Methodology	Assessment and Selection of Market Opportunities		-Positioning Applications	•Review of Differentiation •Positioning Analysis and Setting in Companies •Positioning Analysis and Setting to Customers	x	x	x																															
20	Marketing	Methodology	Assessment and Selection of Market Opportunities		-Product Portfolio Analysis	•Selection of Investment Areas through the Use of Analysis Tools and Models •Selection of Priorities	x	x	x																															
21	Marketing	Business/ Industry	Assessment and Selection of Market Opportunities		-Industry Trends	•Understanding of Industrial Environments and Relevant Regulations •Understanding of Latest Industry Trends •Understanding and Utilization of Industry Specific Needs/Wants	x	x	x																															
22	Marketing	Business/ Industry	Assessment and Selection of Market Opportunities		-Competitive Situation	•Understanding of Competitors Information in the Industry •Understanding of New Entrants	x	x	x																															
23	Marketing	Methodology	Assessment and Selection of Market Opportunities		-Investigation and Analysis of Problems and Needs	•Investigation and Analysis of Current Problems •Understanding of User Needs •Analysis and Prioritization of Needs	x	x	x																															

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24	Marketing	Methodology	Assessment and Selection of Market Opportunities		-Determination of Demands	•Price sensitivity •Inelastic demand •Elastic demand •Estimation of demand curve •Demand elasticity	x	x	x																															
25	Marketing	Methodology	Assessment and Selection of Market Opportunities		-Utilization of Quantitative Tools in Marketing (Analysis of Customer Purchasing Behavior Trends, Discovery of Potential Customers, etc)	•Utilization of Statistical Tools (Multiple Regression, Discriminate Analysis, Factor Analysis, Cluster Analysis, Conjoint Analysis, Multidimensional Scaling) •Model (Queuing Model, Sales Response Model, etc.) •Optimization Routine (Differentiation Formulas, Mathematical Programming, Statistical Decision Theory, Game Theory, etc.)	x	x	x																															
26	Marketing	Methodology	Marketing Strategy		-Marketing Concepts and Methodology	•Understanding and Practice of Marketing Processes (Analysis of Marketing Environments, Discovery of Market Opportunities and Threats, Market Segmentation and Selection of Target Markets, Positioning, Marketing Mix) •Understanding of Marketing Strategy Formulation Process •Formulation and Implementation of Marketing Program Plan	x	x	x																															
27	Marketing	Methodology	Marketing Strategy		-Marketing Strategies Formulation	•Understanding of Corporate Philosophy •Understanding of Business Strategies (Management Strategies, Business Strategies) •Business Portfolio Design •Implementation of Marketing Management •Implementation of Marketing Processes •Understanding of Marketing Strategy Formulation Process	x	x	x																															
28	Marketing	Methodology	Marketing Strategy		-Understanding and Utilization of Analysis Tools and Models	•Business Life Cycle (Introduction Stage, Growth Stage, Maturity Stage, Decline Stage) Models •Product Portfolio Management (PPM) Models •Experience Curve •3C Analysis •SWOT Analysis •7S Models •Michael Porter's Five Forces Model •Value Chain Analysis	x	x	x																															
29	Marketing	Methodology	Marketing Strategy		-B2B Marketing Strategies Formulation	•B2B Marketing Concepts •B2B Marketing Strategies and Planning Techniques •Understanding and Execution of B2B Marketing Process •Difference between Corporate Market and Consumer Market •Corporate Purchase Processes •Influence on Purchasing Decision-makers	x	x	x																															
30	Marketing	Methodology	Marketing Strategy		-Formulation of Marketing Action Plan	•Understanding of Marketing Strategies •Understanding of Marketing policies •Examination of Strategic Options •Preparation of Marketing Action Plan •Review and Reflection of Tactics, Action items, CSF (Critical Success Factor), Milestones, etc. •Evaluation Criteria Setting	x	x	x																															
31	Marketing	Methodology	Marketing Strategy		-Practice of Marketing Activities	•Understanding of Marketing Strategies •Execution of Marketing Policies	x	x	x																															
32	Marketing	Methodology	Marketing Strategy		-Brand Strategies Formulation	•Brand Strategy Development Process and Techniques •Brand Royalty Acquisition •Brand Equity •Brand Strategy Determination (Brand Line Expansion, Brand Expansion, Multi-brand, Co-brand) •Brand Systems (Corporate Brands, Business Brands, Family Brands, Product or Service Brands, etc.) •Product or Service Lines and brands	x	x	x																															

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33	Marketing	Methodology	Marketing Strategy		-Product Strategies Formulation	•Market Segmentation and Selection of Target Markets •Product Positioning •New Product Development •Decision-making on Products •Product Lifecycle •Formulation of Offering Contents •Relationship with Brand Strategies •Market Research Techniques for Product	x	x	x																																			
34	Marketing	Methodology	Marketing Strategy		-Pricing Strategies Formulation	•Price Determination Factors •Pricing Technique (Cost-oriented, Demand-oriented, and Competition-oriented) •Price setting of New Products (Skimming Pricing, Market Penetration Pricing) •Product Mix Pricing •Price Adjustment	x	x	x																																			
35	Marketing	Methodology	Marketing Strategy		-Marketing Strategy Formulation for Service Businesses	•Techniques of Marketing Strategy Formulation for Service Businesses •Review of Differentiation for Service •Service Quality Management •Understanding of the Difference between Product Businesses and Service Businesses •Vertically Integrated Service •Understanding of Customer's Preference in IT Service Transaction Forms	x	x	x																																			
36	Marketing	Methodology	Marketing Strategy		-Marketing Policy Formulation	•Understanding of Marketing Strategies •Examination of Strategic options •Possibilities •Review of Priorities •Marketing Policy Formulation •Preparation of Marketing Action Plan	x	x	x																																			
37	Marketing	Methodology	Marketing Strategy		-Setting and Assessment of Market Communication Evaluation Criteria	•Determination on Assessment Criteria and Methods •Assessment Implementation •Analysis of Assessment Results •Review and Implementation of Proposals for Improvement	x	x	x																																			
38	Marketing	Methodology	Marketing Strategy		-Formulation and Implementation of Business Plan	•Setting of Business Missions •External Environment Analysis •Internal Environment Analysis •Business Targets Setting •Understanding and Execution of Formulation Process for Strategy and Policy •Assessment and Management	x	x	x																																			
39	Marketing	Methodology	Marketing Strategy		-Formulation of Product Strategy and Service Strategy	•Review of Differentiation •Formulation of Positioning Strategies •Analysis of Company's Strength •Analysis for Lifecycle Phase of Products or Service •Development of New Products or New Service •Product or Service Lines or Brands	x	x	x																																			
40	Marketing	Methodology	Marketing Environment Analysis		-Macro Environment Analysis	•Social Conditions •Economic Environments •Demographic Environment •Technical Environments •Politics •Legal Environments •Cultural Environments	x	x	x																																			
41	Marketing	Methodology	Marketing Environment Analysis		-Internal Environment Analysis (Analysis of Company's Strengths and Weaknesses)	•Strengths and Weaknesses of Marketing Strategies •Analysis for Superiority of Products or Service •Financial Analysis •Organizational Analysis •Analysis of Human Resources	x	x	x																																			

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42	Marketing	Methodology	Marketing Environment Analysis		-Customer Analysis	•Population of Consumers •Demands of Customers •Understanding of Needs/Wants •Understanding of Factors Influencing on Purchase Activities (Cultural Factors, Social Factors, Personal Factors, Psychological Factors) •Understanding of Buying Behavior •Understanding of Purchasing Decision Processes •Purchasing Decision-makers	x	x	x																															
43	Marketing	Methodology		Marketing Integration	-Marketing Management	•Formulation and Practice of Marketing Strategies •Analysis of Marketing Environments and Discovery of Market Opportunities •Market Segmentation (Geographical Variances, Demographic Variance, Psychological Variance, Behavioral Variances, etc.) •Selection of Target Markets •Positioning •Marketing Mix •Price Strategies •Products or Service Strategies •Sales Channel Strategies •Market Communication Strategies •Implementation and Evaluation of Marketing Mix Policies	x																																	
44	Marketing	Methodology		Marketing Integration	-Promotion Strategy Formulation	•Promotion Plan Formulation •Utilization Techniques of Promotion Mix •Assessment of Promotional	x																																	
45	Marketing	Methodology		Marketing Integration	-Understanding of Customer Purchasing Behavior	•Consumer Behavior Model •Understanding of Factors Influencing on Purchasing Behavior (Cultural Factors, Social Factors, Personal Factors, Psychological Factors) •Understanding of Purchasing Decision Processes •Understanding of Each Phase of Purchasing Decision Processes •Purchasing Decision-makers	x																																	
46	Marketing	Methodology		Marketing Integration	- Sales Channel Strategies Formulation	•Alliance Strategy Formulation with Sales Channels •Selection and Design of Sales Channels •Support for Sales Channels •Motivation •Understanding and Management of Sales Channel Conflicts	x																																	
47	Marketing	Methodology		Marketing Integration	-Execution and Evaluation of Marketing Strategies	•Application of Marketing Process and Practice Techniques •Practice Techniques of Marketing Programs •Formulation and Execution of Marketing Plans (Tactics, Action items, Milestones, etc.) •Evaluation of Marketing Programs	x																																	
48	Marketing	Methodology		Sales Channel Strategy	-Application of Sales Channel Readiness Concept		x																																	
49	Marketing	Methodology		Sales Channel Strategy	-Sales Channel Capacity Analysis and Establishment of Support Structure			x																																
50	Marketing	Methodology		Sales Channel Strategy	-Creation of Joint Plans with partners		x																																	
51	Marketing	Methodology		Sales Channel Strategy	-Contract Processing with Sales Channels	•Contract Preparation according to Partner Types •Setting of Trade Conditions (Total Transaction Value, Price, Stock, Quantity, Discounting, Financial Condition, etc)		x																																

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52	Marketing	Methodology		Sales Channel Strategy	-Sales Channel Design	•Service Level Analysis •Objective Setting •Determination and Evaluation of Sales Channel Nominees •Selection of Sales Channel Members •Educating, Motivating and Evaluating Channel Members		x																																		
53	Marketing	Methodology		Sales Channel Strategy	-Role of Sales Channel	•Understanding of Sales Channel Functions and Flow, and Review of Optimal Solutions •Understanding of the Phase Number for Sales Channels, and Review of Optimal Solutions		x																																		
54	Marketing	Methodology		Sales Channel Strategy	-Sales Channel Conflict	•Understanding of Conflict and Competition Types •Understanding of Causes for Sales Channel Conflicts •Management of Sales Channel Conflicts		x																																		
55	Marketing	Methodology		Sales Channel Strategy	-Legal and Ethical Problems with Sales Channels Relationship	•Exclusive Transactions •Exclusive Territory •Tie-in Purchase Contracts		x																																		
56	Marketing	Methodology		Sales Channel Strategy	-Formulation of Sales Channel Strategy	•Alliance Strategy Formulation with Sales Channels •Selection and Design of Sales Channels •Support for Sales Channels •Motivation •Understanding and Management of Sales Channel Conflicts		x																																		
57	Marketing	Methodology		Market Communication Strategy	-Formulation of Market Communication Strategies	•Formulation of Market Communication Strategies •Purchaser Characteristics and Buying Psychology •Understanding and Utilization of AIDA Model (Attention, Interest, Desire, Action) •Push Strategies and Pull Strategies •Understanding and Utilization of Market Communication Means •Target Setting and Budget Decision for Market Communication •Decision of Communication Mix, and Advertising Strategies •Creative Strategies •Media Strategies •Sales Promotion Strategies •Web Marketing			x																																	
58	Marketing	Methodology		Market Communication Strategy	-Formulation of Market Communication Competitive Strategy	•Formulation of Market Communication Strategies •Market Communication Evaluation •Planning and Implementation of Strategic Advertising •Implementation of Sales Promotion for Competitive Advantages •Implementation of Promotion for Competitive Advantages (Differentiation by Direct Marketing Campaigns, etc.) •Planning and Practice of Event Marketing			x																																	
59	Marketing	Methodology		Market Communication Strategy	-Campaign Management	•Utilization and Practice of Campaign Management			x																																	
60	Marketing	Methodology		Market Communication Strategy	-Development of Market Communications	•Clarification of Standard Audience •Image Analysis •Target Setting •Creation of Messages •Selection of Market Communication Channels •Budget Decision			x																																	
61	Marketing	Methodology		Market Communication Strategy	-Implementation of Market Communications	•Targets Setting •Message Planning •Selection of Media •Direct Marketing •Event Planning, etc. •Performance with Partners			x																																	

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62	Sales	Business/ Industry	Analysis of Customer Environment		-Industry knowledge	·Knowledge Utilization of Industry Common Applications ·Knowledge Utilization of Industry Specific Applications ·Industry Business Trend ·Technology Trend ·Understanding of Competition Status ·Industry Terms ·Understanding and Utilization of Relevant Regulations ·Understanding and Utilization of Industry Specific Business Environments ·Understanding and Utilization of Industry Specific Business Practice ·Understanding and Utilization of Industry Specific Business Operations																																				
63	Sales	Methodology	Analysis of Customer Environment		-Industry Competition Status	·Understanding of Information on Competitors in the Industry																																				
64	Sales	Methodology	Analysis of Customer Environment		-Customer Business Contents	·History of Business Management ·Understanding of Customer Business Operation ·Understanding of Customer Markets ·Understanding of Separate Business Operation ·Corporate Governance ·Organizational Strategies																																				
65	Sales	Methodology	Analysis of Customer Environment		-Customer Management Policy	·Understanding of Customers Business Policies ·Understanding of Customer IT Strategy																																				
66	Sales	Methodology	Analysis of Customer Environment		-Financial Analysis	·Utilization of Knowledge for Financial Statements ·Analysis and Understanding of Management Index ·Understanding and Utilization of Financial Analysis Techniques ·Analysis and Understanding of Financial Situation																																				
67	Sales	Methodology	Analysis of Customer Environment		-IT Environments	·Understanding and Analysis of Customers' IT Environment																																				
68	Sales	Methodology	Analysis of Customer Environment		-Decision Processes	·Understanding of Organizational Structure ·Understanding of Decision Processes ·Evaluation Confirmation by Decision Makers																																				
69	Sales	Methodology	Analysis of Customer Environment		-Industry Trends	·Understanding of Industrial Environments and Relevant Regulations ·Understanding of Latest Industry Trends ·Understanding and Utilization of Industry Specific Needs/Wants																																				
70	Sales	Technology	Proposal of IT Solution		-Latest Technology Trends	·Understanding of Latest Hardware Technology Trends ·Understanding of Latest Middleware Technology Trends ·Understanding of Latest Platform Technology Trends ·Understanding of Latest Network Technology Trends ·Understanding of Latest Database Technology Trends ·Understanding of Latest Security Technology Trends ·Understanding of Latest System Management Technology Trends																																				
71	Sales	Business/ Industry	Proposal of IT Solution		-Latest Application Trends	·Understanding of Latest Industry Applications Trends ·Understanding of Latest Application Package Trends																																				
72	Sales	Methodology	Proposal of IT Solution		-Team Organization	·Organization of Sales Team ·Action Plan Arrangement																																				

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73	Sales	Methodology	Proposal of IT Solution		-Utilization of Consulting Techniques	•Hypothesis Generation •Data Collection •Interview •Session Management •Data Analysis •Verification •Implementation of Communication and Negotiation •Report Creation					x	x	x																															
74	Sales	Methodology	Proposal of IT Solution		-Solutions Selection	•Solution Evaluation •Criteria Clarification for Customers' Purchase and Evaluation of Solutions •Selection of Proposal Solutions					x	x	x																															
75	Sales	Methodology	Proposal of IT Solution		-Solutions Proposal	•Review of Proposed Content •Solution Design •Proposal Creation •Conformity Assessment •Confirmation of Willingness to Purchase •Definition of Follow-on Activities					x	x	x																															
76	Sales	Methodology	Proposal of IT Solution		-Competitive Products Information	•Understanding of Information on Competitors in the Industry •Understanding of New Entrants					x	x	x																															
77	Sales	Methodology	Management of Customer Satisfaction		-Customer Satisfaction Management	•Understanding of Customer Satisfaction Concept •Implementation of Customer Satisfaction Survey •Analysis and Assessment of Survey Results •Formulation and Practice of Customer Satisfaction Improvement Plan in accordance with Assessment Results					x	x	x																															
78	Sales	Methodology	Sales Office Work Management		-Contract Management	•Understanding of Contract Operations •Confirmation and Agreement of Contract Conditions •Contract Conclusion •Exception Handling •Understanding of Outsourcing and OEM Contract Affairs •Understanding of and Compliance with Relevant Regulations					x	x	x																															
79	Sales	Methodology	Sales Office Work Management		-Order Management	•Understanding and Utilization of Knowledge on Order Acceptance Operation •Confirmation and Agreement of Delivery Conditions •Arrangement of Order Acceptance Operation •Arrangement for Logistics Operation					x	x	x																															
80	Sales	Methodology	Sales Office Work Management		-Payment Management, Collection Management	•Understanding and Utilization of Knowledge on Payment Service and Collection Practices •Execution of Collection Practice					x	x	x																															
81	Sales	Methodology	Sales Office Work Management		-Profit and Loss Management	•Understanding of Sales, Costs, and Profits and Losses •Practice of Profit and Loss Management					x	x	x																															
82	Sales	Methodology	Sales Office Work Management		-Contract Negotiation	•Understanding of Customer Environment •Review of Service Specifications and Service Levels •Confirmation and Negotiation Related to Contract Articles •Preparation of Contract Documents •Negotiation with Customers' Contracting Departments •Coordination with Relevant In-company Departments •Consensus Building on Contractual Coverage					x	x	x																															
83	Sales	Methodology	Sales Office Work Management		-Legal Affairs for Sales	•Credit Research •Understanding and Observance of Relevant Laws and Regulations (related to Contracts, Payments, Collection, Mail Order Law, Personal Information Protection Law, Patent Law, Copyright Law, etc.)					x	x	x																															
84	Sales	Methodology	Sales Office Work Management		-Corporate Ethics	•Compliance with Corporate Ethics Codes					x	x	x																															

[illegible]

No	Job Category	Skill Category	Skill Item		Knowledge Item		Specialty Field																																			
							Marketing			Sales		Consultant	IT Architect		Project Management			IT Specialist					Application Specialist		Software Development		Customer Service		IT Service Management			Education										
			Common Skill Item	Specialty Field Specific Skill Item	Knowledge Item (Middle Item)	Knowledge Item (Minor Item)	Marketing Management	Sales Channel Strategy	Market Communication	Consulting Sales by Visiting Customers	Product Sales by Visiting Customers	Sales via Media	Industry	Business Function	Application Architecture	Integration Architecture	Infrastructure Architecture	Systems Development	IT Outsourcing	Network Service	Software Product Development	Platform	Network	Database	Common Application Infrastructure	Systems Management	Security	Business Application System	Business Application Package	Operating System	Middleware	Application Software	Hardware	Software	Facility Management	Operations Management	System Operation	Operation	Service Desk	Training Planning	Instructions	
99	Consultant	Methodology	Utilization of Consulting Methodology		-Understanding and Utilization of Analysis Tools and Models	-Business Life Cycle Models (Introduction Stage, Growth Stage, Maturity Stage, Decline Stage) -Product Portfolio Management (PPM) Model -Experience Curve -3C Analysis -SWOT Analysis -7S Models -Michael Porter's Five Forces Model -Value Chain Analysis							x	x																												
100	Consultant	Business/ Industry	Knowledge Management and Utilization		-Management and Utilization of Knowledge	-Databases Creation of Knowledge (Added Value, Structuring, Sharing) -Knowledge Utilization -Maintenance and Management of Knowledge -Understanding of Effects, and Improvement -Business Model Patents							x	x																												
101	Consultant	Business/ Industry	Identification and Analysis of Business Problems (AS-IS Analysis)		-Business Model Analysis								x	x																												
102	Consultant	Business/ Industry	Identification and Analysis of Business Problems (AS-IS Analysis)		-Collection of Customer, Market and Industry-related Information								x	x																												
103	Consultant	Business/ Industry	Identification and Analysis of Business Problems (AS-IS Analysis)		-Information Collection of Relevant Legal Regulation and External Constraint								x	x																												
104	Consultant	Business/ Industry	Identification and Analysis of Business Problems (AS-IS Analysis)		-Understanding of Positioning in Industry								x	x																												
105	Consultant	Business/ Industry	Identification and Analysis of Business Problems (AS-IS Analysis)		-Collection of Open Information								x	x																												
106	Consultant	Business/ Industry	Identification and Analysis of Business Problems (AS-IS Analysis)		-Management and Organizational Operating Structure								x	x																												
107	Consultant	Business/ Industry	Identification and Analysis of Business Problems (AS-IS Analysis)		-Information Collection of Management Index								x	x																												
108	Consultant	Business/ Industry	Identification and Analysis of Business Problems (AS-IS Analysis)		-Understanding Issues of Business Environment								x	x																												
109	Consultant	Business/ Industry	Identification and Analysis of Business Problems (AS-IS Analysis)		-Information Collection of Business Plan, Vision and Mission Statement								x	x																												
110	Consultant	Business/ Industry	Identification and Analysis of Business Problems (AS-IS Analysis)		-Summarizing Business Plan-related Information								x	x																												

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							Marketing			Sales		Consultant	IT Architect			Project Management			IT Specialist					Application Specialist		Software Development		Customer Service		IT Service Management			Education												
			Common Skill Item	Specialty Field Specific Skill Item	Knowledge Item (Middle Item)	Knowledge Item (Minor Item)	Marketing Management	Sales Channel Strategy	Market Communication	Consulting Sales by Visiting Customers	Product Sales by Visiting Customers	Sales via Media	Industry	Business Function	Application Architecture	Integration Architecture	Infrastructure Architecture	Systems Development	IT Outsourcing	Network Service	Software Product Development	Platform	Network	Database	Common Application Infrastructure	Systems Management	Security	Business Application System	Business Application Package	Operating System	Middleware	Application Software	Hardware	Software	Facility Management	Operations Management	System Operation	Operation	Service Desk	Training Planning	Instructions				
111	Consultant	Business/ Industry	Identification and Analysis of Business Problems (AS-IS Analysis)		-Exchange views of Business Plan							x	x																																
112	Consultant	Business/ Industry	Identification and Analysis of Business Problems (AS-IS Analysis)		-Extraction of Problems from Top Management's Point of View							x	x																																
113	Consultant	Business/ Industry	Identification and Analysis of Business Problems (AS-IS Analysis)		-Structuring, Linking, and Range Setting of Problems							x	x																																
114	Consultant	Business/ Industry	Identification and Analysis of Business Problems (AS-IS Analysis)		-Benchmark Survey							x	x																																
115	Consultant	Business/ Industry	Identification and Analysis of Business Problems (AS-IS Analysis)		-Survey of Business Process							x	x																																
116	Consultant	Business/ Industry	Identification and Analysis of Business Problems (AS-IS Analysis)		-Risk Control Assessment of Business Model							x	x																																
117	Consultant	Business/ Industry	Identification and Analysis of Business Problems (AS-IS Analysis)		-Exchange Views with a Person in Charge of Operations							x	x																																
118	Consultant	Technology	Problem Discovery from Knowledge of Operational IT (Knowledge Utilization)		-Latest Trends of Solutions							x	x																																
119	Consultant	Technology	Problem Discovery from Knowledge of Operational IT (Knowledge Utilization)		-IT Management Structure							x	x																																
120	Consultant	Technology	Problem Discovery from Knowledge of Operational IT (Knowledge Utilization)		-IT Utilization Trends in Industry and Business							x	x																																
121	Consultant	Technology	Problem Discovery from Knowledge of Operational IT (Knowledge Utilization)		-Survey of Information Technology Trends							x	x																																

No	Job Category	Skill Category	Skill Item		Knowledge Item		Specialty Field																																				
							Marketing			Sales		Consultant	IT Architect			Project Management			IT Specialist					Application Specialist		Software Development		Customer Service		IT Service Management			Education										
			Common Skill Item	Specialty Field Specific Skill Item	Knowledge Item (Middle Item)	Knowledge Item (Minor Item)	Marketing Management	Sales Channel Strategy	Market Communication	Consulting Sales by Visiting Customers	Product Sales by Visiting Customers	Sales via Media	Industry	Business Function	Application Architecture	Integration Architecture	Infrastructure Architecture	Systems Development	IT Outsourcing	Network Service	Software Product Development	Platform	Network	Database	Common Application Infrastructure	Systems Management	Security	Business Application System	Business Application Package	Operating System	Middleware	Application Software	Hardware	Software	Facility Management	Operations Management	System Operation	Operation	Service Desk	Training Planning	Instructions		
122	Consultant	Technology	Problem Discovery from Knowledge of Operational IT (Knowledge Utilization)		-Survey of Information Systems to Assist Operational Process							x	x																														
123	Consultant	Business/ Industry	Suggestion for Solutions (TO-BE Suggestion)		-Problem Analysis							x	x																														
124	Consultant	Business/ Industry	Suggestion for Solutions (TO-BE Suggestion)		-Analysis of Affected Area							x	x																														
125	Consultant	Business/ Industry	Suggestion for Solutions (TO-BE Suggestion)		-Proposal of Prioritization							x	x																														
126	Consultant	Business/ Industry	Suggestion for Solutions (TO-BE Suggestion)		-Derivation for Directions of Solutions							x	x																														
127	Consultant	Business/ Industry	Suggestion for Solutions (TO-BE Suggestion)		-Verification for Directions of Solutions							x	x																														
128	Consultant	Business/ Industry	Suggestion for Solutions (TO-BE Suggestion)		-Estimation of Return on Investment							x	x																														
129	Consultant	Business/ Industry	Suggestion for Solutions (TO-BE Suggestion)		-Strategy Deployment Planning							x	x																														
130	Consultant	Business/ Industry		Knowledge Utilization of Industry	-Industry-Specific Professional Knowledge							x																															
131	Consultant	Business/ Industry		Knowledge Utilization of Business Function	-Business Knowledge Common to Industries								x																														
132	IT Architect	Methodology	Design of Architecture		-Analysis and Definition of Requirements (Constraints)									x	x	x																											
133	IT Architect	Methodology	Design of Architecture		-Definition of IT Architecture Design Policy									x	x	x																											
134	IT Architect	Methodology	Design of Architecture		-Design of IT Architecture									x	x	x																											
135	IT Architect	Methodology	Design of Architecture		-Feasibility Assessment from the Viewpoints of IT Architecture and Technology									x	x	x																											
136	IT Architect	Methodology	Design of Architecture		-Definition of Technological Problems and Analysis of Alternatives									x	x	x																											
137	IT Architect	Methodology	Design of Architecture		-Assessment of Platform and Component Technology									x	x	x																											
138	IT Architect	Methodology	Design Techniques		-Understanding of Modeling Techniques									x	x	x																											

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							Marketing			Sales		Consultant		IT Architect			Project Management			IT Specialist					Application Specialist		Software Development		Customer Service		IT Service Management			Education						
			Common Skill Item	Specialty Field Specific Skill Item	Knowledge Item (Middle Item)	Knowledge Item (Minor Item)	Marketing Management	Sales Channel Strategy	Market Communication	Consulting Sales by Visiting Customers	Product Sales by Visiting Customers	Sales via Media	Industry	Business Function	Application Architecture	Integration Architecture	Infrastructure Architecture	Systems Development	IT Outsourcing	Network Service	Software Product Development	Platform	Network	Database	Common Application Infrastructure	Systems Management	Security	Business Application System	Business Application Package	Operating System	Middleware	Application Software	Hardware	Facility Management	Operations Management	System Operation	Operation	Service Desk	Training Planning	Instructions
139	IT Architect	Methodology	Design Techniques		-Understanding and Application of Data Modeling Techniques									x	x	x																								
140	IT Architect	Methodology	Design Techniques		-Understanding and Application of Process Modeling Techniques									x	x	x																								
141	IT Architect	Methodology	Design Techniques		-Understanding and Application of Performance Modeling Techniques									x	x	x																								
142	IT Architect	Methodology	Design Techniques		-Understanding and Utilization of Application Design Techniques									x	x	x																								
143	IT Architect	Methodology	Design Techniques		-Understanding and Application of Infrastructure Design Techniques									x	x	x																								
144	IT Architect	Methodology	Standardization and Reuse		-Definition of Development Standards									x	x	x																								
145	IT Architect	Methodology	Standardization and Reuse		-Definition of IT Standards based on Basic Principles									x	x	x																								
146	IT Architect	Methodology	Standardization and Reuse		-Reuse of Existing Assets									x	x	x																								
147	IT Architect	Methodology	Standardization and Reuse		-Understanding and Application of Reuse Techniques									x	x	x																								
148	IT Architect	Methodology	Standardization and Reuse		-Development and Application of Reusable Assets									x	x	x																								
149	IT Architect	Methodology	Standardization and Reuse		-Understanding of Reusable Asset Management Process									x	x	x																								
150	IT Architect	Methodology	Utilization of Consulting Techniques		-Selection and Utilization of Consulting Techniques	•Comparison, Analysis, Selection and Application of Consulting Techniques •Definition and Practice of Process •Definition and Creation of Deliverables								x	x	x																								
151	IT Architect	Methodology	Utilization of Consulting Techniques		-Understanding and Utilization of Analysis Tools and Models	•Business Life Cycle Models (Introduction Stage, Growth Stage, Maturity Stage, Decline Stage) •Product Portfolio Management (PPM) Model •Experience Curve •3C Analysis •SWOT Analysis •7S Models •Michael Porter's Five Forces Model •Value Chain Analysis								x	x	x																								
152	IT Architect	Methodology	Knowledge Management and Utilization		-Management and Utilization of Knowledge	•Creation of Databases from Knowledge (added value, structuring, sharing) •Utilization of Knowledge •Maintenance and Management of Knowledge •Understanding Effects, and Improvement Implementation •Business model patents								x	x	x																								

No	Job Category	Skill Category	Skill Item		Knowledge Item		Specialty Field																																			
							Marketing			Sales		Consultant	IT Architect			Project Management			IT Specialist					Application Specialist		Software Development		Customer Service		IT Service Management			Education									
			Marketing Management	Sales Channel Strategy	Market Communication	Consulting Sales by Visiting Customers	Product Sales by Visiting Customers	Sales via Media	Industry	Business Function	Application Architecture	Integration Architecture	Infrastructure Architecture	Systems Development	IT Outsourcing	Network Service	Software Product Development	Platform	Network	Database	Common Application Infrastructure	Systems Management	Security	Business Application System	Business Application Package	Operating System	Middleware	Application Software	Hardware	Software	Facility Management	Operations Management	System Operation	Operation	Service Desk	Training Planning	Instructions					
153	IT Architect	Technology	Technology		-Understanding of IT Industry Trends	•Understanding of IT Market Scale and Trends Domestic and Abroad •Understanding of Technology Trends Related to Application •Understanding of Technology Trends Related to Business Model Patents																																				
154	IT Architect	Technology	Technology		-Understanding of Relevant Technology (IT) Trends	•Understanding of Hardware Technology Trends •Understanding of Middleware Technology Trends •Understanding of Platform Technology Trends •Understanding of Network Technology Trends •Understanding of Database Technology Trends •Understanding of Security Technology Trends •Understanding of System Management Technology Trends																																				
155	IT Architect	Technology	Technology		-Understanding and Application of Relevant Technology (IT) Standards																																					
156	IT Architect	Business/ Industry	Industry (Business)		-Understanding of Relevant Industry Trends	•Understanding of Industry Business Trends, Technology Trends and Competitive Status																																				
157	IT Architect	Business/ Industry	Industry (Business)		-Understanding of Applications in Relevant Industries	•Utilization of Industry Common Applications Knowledge •Utilization of industry Specific Applications Knowledge •Optimum Platform Selection •Practice of Industrial Application Design																																				
158	IT Architect	Business/ Industry	Industry (Business)		-Understanding and Application of Relevant Industries (Businesses) Standards	•Understanding and Utilization of Industry Terms and Relevant Regulations •Understanding and Utilization of Industry Specific Business Environment •Understanding and Utilization of Industry Specific Business Practices •Understanding and Utilization of Industry Specific Operation																																				
159	IT Architect	Methodology		Application Architecture Design	-Definition of Functional Requirements	•Knowledge of Target Domain																																				
160	IT Architect	Methodology		Application Architecture Design	-Design of Functional Architecture	•User Interface •Application Framework •Logic Data Framework																																				
161	IT Architect	Methodology		Application Architecture Design	-Assessment for Feasibility of Functional Architecture	•Assessment of Application Development Techniques •Assessment of Application Development Tools •Assessment of Application Test Strategies and Plans •Assessment of Operation Transfer Strategies and Plans																																				
162	IT Architect	Methodology		Design of Integration Architecture	-Definition of Integration Requirements	•Knowledge of Target Domain •System Management and Operation •Security •Network •Platform •Performance and Capacity •IT Standards, etc.																																				
163	IT Architect	Methodology		Design of Integration Architecture	-Integrated Architecture Design	•User Interface Integrated Design •Access Integrated Design •Application Integrated Design •Process Integrated Design •Data Integrated Design																																				

№	Job Category	Skill Category	Skill Item		Knowledge Item		Specialty Field																																			
							Marketing			Sales		Consultant		IT Architect		Project Management			IT Specialist					Application Specialist		Software Development		Customer Service		IT Service Management			Education									
			Common Skill Item	Specialty Field Specific Skill Item	Knowledge Item (Middle Item)	Knowledge Item (Minor Item)	Marketing Management	Sales Channel Strategy	Market Communication	Consulting Sales by Visiting Customers	Product Sales by Visiting Customers	Sales via Media	Industry	Business Function	Application Architecture	Integration Architecture	Infrastructure Architecture	Systems Development	IT Outsourcing	Network Service	Software Product Development	Platform	Network	Database	Common Application Infrastructure	Systems Management	Security	Business Application System	Business Application Package	Operating System	Middleware	Application Software	Hardware	Software	Facility Management	Operations Management	System Operation	Operation	Service Desk	Training Planning	Instructions	
164	IT Architect	Methodology		Design of Integration Architecture	-Assessment for Feasibility of Integrated Architecture	•Promotion of Reuse and Standardization •Assessment of Application Development Techniques •Assessment of Application Development Tools •Assessment of Application Test Strategies and Plans •Assessment of Operation Transfer Strategies and Plans •Assessment of System Infrastructure Design Techniques •Assessment of System Infrastructure Design Tools •Assessment of System Infrastructure Test Strategies and Plans •Assessment of System Infrastructure Transfer Strategies and Plans																																				
165	IT Architect	Methodology		Design of infrastructure architecture	-Definition of Infrastructure Requirements (Mainly Non-functional Requirements)	•Knowledge of Target Domain •System Management and Operation •Security •Network •Platform •Performance and Capacity, etc.																																				
166	IT Architect	Methodology		Design of Infrastructure Architecture	-Infrastructure Architecture Design	•Design of System Management and Operation •Security Design •Network Design •Platform Design (OS, Middleware, etc.) •Performance Design •Availability Design •Design for Physical Data Structure, etc.																																				
167	IT Architect	Methodology		Design of Infrastructure Architecture	-Assessment for Feasibility of Infrastructure Architecture	•Assessment of System Infrastructure Design Techniques •Assessment of System Infrastructure Design Tools •Assessment of System Infrastructure Test Strategies and Plans •Assessment of System Infrastructure Transfer Strategies and Plans																																				
168	Project Management	Methodology	Analysis of Business Operations		-Analysis of Business Operation Requirement	•Understanding of User Needs •Needs Analysis and Prioritization											x	x	x	x																						
169	Project Management	Methodology	Analysis of Business Operations		-Analysis of Technical Requirements	•Analysis of Existing IT Environment •Understanding of New Technical Requirements •Needs Analysis and Prioritization											x	x	x	x																						
170	Project Management	Business/Industry	Analysis of Business Operations		-Informatization and Management	•Information Strategies •Business Accounting •Management Engineering •Information System Utilization in the areas of Engineering System and Business System •Understanding and Compliance of Relevant Regulations											x	x	x	x																						
171	Project Management	Technology	Analysis of Business Operations		-Industry Knowledge	•Utilization of Industry Common Applications Knowledge •Utilization of industry Specific Applications Knowledge •Understanding of Industry Business Trend, Technology Trend, and Competition Status •Understanding and Utilization of Industry Terms and Relevant Regulations •Understanding and Utilization of Industry Specific Business Environments •Understanding and Utilization of Industry Specific Business Practice •Understanding and Utilization of Industry Specific Business Operations											x	x	x	x																						
172	Project Management	Technology	Analysis of Business Operations		-Content of General Business	•General Business Contents •Understanding and Utilization of Characteristics •Understanding and Utilization of Industry-classified Standard Technology											x	x	x	x																						

No	Job Category	Skill Category	Skill Item		Knowledge Item		Specialty Field																																				
							Marketing			Sales	Consultant	IT Architect		Project Management		IT Specialist				Application Specialist	Software Development		Customer Service		IT Service Management			Education															
			Common Skill Item	Specialty Field Specific Skill Item	Knowledge Item (Middle Item)	Knowledge Item (Minor Item)	Marketing Management	Sales Channel Strategy	Market Communication	Consulting Sales by Visiting Customers	Product Sales by Visiting Customers	Sales via Media	Industry	Business Function	Application Architecture	Integration Architecture	Infrastructure Architecture	Systems Development	IT Outsourcing	Network Service	Software Product Development	Platform	Network	Database	Common Application Infrastructure	Systems Management	Security	Business Application System	Business Application Package	Operating System	Middleware	Application Software	Hardware	Software	Facility Management	Operations Management	System Operation	Operation	Service Desk	Training Planning	Instructions		
173	Project Management	Technology	Analysis of Business Operations		-Latest General Business Trends	•Understanding and Utilization of Business Specific Latest Trends •Understanding and Utilization for Case Examples of Business Specific System Installation										x	x	x	x																								
174	Project Management	Methodology	Utilization of Consulting Techniques		-Selection and Utilization of Consulting Techniques	•Comparison, Analysis, Selection and Application of Consulting Techniques •Definition and Practice of Process •Definition of Deliverables										x	x	x	x																								
175	Project Management	Methodology	Utilization of Consulting Techniques		-Understanding and Utilization of Analysis Tools and Models	•Business Life Cycle Models (Introduction Stage, Growth Stage, Maturity Stage, Decline Stage) •Product Portfolio Management (PPM) Model •Experience Curve •3C Analysis •SWOT Analysis •7S Models •Michael Porter's Five Forces Model •Value Chain Analysis											x	x	x	x																							
176	Project Management	Methodology	Knowledge Management and Utilization		-Management and Utilization of Knowledge	•Database Creation from Knowledge (Added Value, Structuring, Sharing) •Utilization of Knowledge •Maintenance and Management of Knowledge •Understanding of Effects, and Improvement Implementation •Business Model Patents											x	x	x	x																							
177	Project Management	Technology		Design and Development Management of IT Solutions	-Software Engineering	•IT Standardization Techniques •Development Techniques •Development Support Tools and Techniques •Programming Techniques •Test Techniques •Reuse Techniques •Security and Privacy •Security Tools and Techniques •External Design •Internal Design •Object Oriented Development •Programming Techniques •Debug Techniques											x																										
178	Project Management	Methodology		Design and Development Management of IT Solutions	-Requirement Definition Techniques	•Existing Operating Analysis •Understanding of New Operating Requirements •Definition of Operating Requirements •Analysis of Existing IT Environment •Understanding of New Technical Requirements •Definition of Technical Requirements •Utilization and Implementation of Interview Techniques •Creation of Requirements Definition •Needs Analysis and Prioritization											x																										
179	Project Management	Technology		Design and Development Management of IT Solutions	-Methods for Technological Problem Solving	•Utilization and Implementation of Technical Problem Solving Method											x																										
180	Project Management	Technology		Design and Development Management of IT Solutions	-Latest Technology Trends	•Understanding of Latest Hardware Technology Trends •Understanding of Latest Middleware Technology Trends •Understanding of Latest Platform Technology trends •Understanding of Latest Network Technology Trends •Understanding of Latest Database Technology Trends •Understanding of Latest Security Technology Trends •Understanding of Latest System Management Technology Trends												x																									

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							Marketing			Sales	Consultant	IT Architect		Project Management		IT Specialist					Application Specialist		Software Development		Customer Service		IT Service Management			Education										
			Common Skill Item	Specialty Field Specific Skill Item	Knowledge Item (Middle Item)	Knowledge Item (Minor Item)	Marketing Management	Sales Channel Strategy	Market Communication	Consulting Sales by Visiting Customers	Product Sales by Visiting Customers	Sales via Media	Industry	Business Function	Application Architecture	Integration Architecture	Infrastructure Architecture	Systems Development	IT Outsourcing	Network Service	Software Product Development	Platform	Network	Database	Common Application Infrastructure	Systems Management	Security	Business Application System	Business Application Package	Operating System	Middleware	Application Software	Hardware	Software	Facility Management	Operations Management	System Operation	Operation	Service Desk	Training Planning
181	Project Management	Business/ Industry		Design and Development Management of IT Solutions	-Latest Trends in IT Market Trends	• Understanding of IT Market Scale and Trends Domestic and Abroad • Understanding of Technology Trends Related to Application • Understanding of Technology Trends Related to Business Model Patents • Understanding of Next-generation E-business and Its Development										x																								
182	Project Management	Technology		Design and Development Management of IT Solutions	-Latest General Business Trends	• Understanding and Utilization of Business Specific Latest Trends • Understanding and Utilization for Case Examples of Business Specific System Installation										x																								
183	Project Management	Technology		Design and Development Management of IT Solutions	-Latest Business Application Package Trends	• Understanding and Utilization of Latest Business Application Package Trends • Understanding and Utilization of Competitive Status of Products • Understanding and Utilization of installation cases										x																								
184	Project Management	Technology		Design and Development Management of IT Solutions	-Security Systems Implementation and Inspection	• Selection and Installation of Security Products and Tools • Security System Development • Security Technology Implementation										x																								
185	Project Management	Methodology		Information System Management	-System Management System	• Selection of Organizations and Roles • Workflow Formulation • Formulation of Operation Standards • Establishment of Management System											x																							
186	Project Management	Methodology		Information System Management	-Relationship Management with User Divisions	• Understanding for Demands of Uses and Management											x																							
187	Project Management	Methodology		Information System Management	-Planning of Information Systems	• Formulation of Systemization Strategy • Formulation of Systemization Plan											x																							
188	Project Management	Methodology		Information System Management	-Systems Development	• Formulation and Implementation of System Development Plan											x																							
189	Project Management	Methodology		Information System Management	-Application for Production System	• Formulation and Implementation of System Transfer Plan											x																							
190	Project Management	Methodology		Information System Management	-Information Service Support	• Quality Control											x																							
191	Project Management	Methodology		Information System Management	-Information Service Offering	• System Operation											x																							
192	Project Management	Methodology		Information System Management	-Information Resources Management	• Formulation and Management of Information System Asset Plan											x																							
193	Project Management	Methodology		Information System Management	-Requirement Definition Techniques	• Existing Operating Analysis • Understanding of New Operating Requirements • Definition of Operating Requirements • Analysis of Existing IT Environment • Understanding of New Technical Requirements • Definition of Technical Requirements • Utilization and Implementation of Interview Techniques • Creation of Requirements Definition • Needs Analysis and Prioritization											x																							
194	Project Management	Methodology		Information System Management	-Technical Problem Solving Method	• Utilization and implementation of technical problem solving method											x																							

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							Marketing			Sales		Consultant	IT Architect		Project Management		IT Specialist					Application Specialist		Software Development		Customer Service		IT Service Management			Education									
			Common Skill Item	Specialty Field Specific Skill Item	Knowledge Item (Middle Item)	Knowledge Item (Minor Item)	Marketing Management	Sales Channel Strategy	Market Communication	Consulting Sales by Visiting Customers	Product Sales by Visiting Customers	Sales via Media	Industry	Business Function	Application Architecture	Integration Architecture	Infrastructure Architecture	Systems Development	IT Outsourcing	Network Service	Software Product Development	Platform	Network	Database	Common Application Infrastructure	Systems Management	Security	Business Application System	Business Application Package	Operating System	Middleware	Application Software	Hardware	Facility Management	Operations Management	System Operation	Operation	Service Desk	Training Planning	Instructions
195	Project Management	Methodology		Information System Management	-Latest technology trends	• Understanding of Latest Hardware Technology Trends • Understanding of Latest Middleware Technology Trends • Understanding of Latest Platform Technology trends • Understanding of Latest Network Technology Trends • Understanding of Latest Database Technology Trends • Understanding of Latest Security Technology Trends • Understanding of Latest System Management Technology Trends											x																							
196	Project Management	Methodology		Information System Management	-Corporate Accounting	• Current Cost Accounting • Consolidated Accounting • Cash Flow Accounting • Pension Accounting • Tax Effect Accounting • R & D Cost and Software Accounting											x																							
197	Project Management	Methodology		Information System Management	-Corporate Management	• Cashflow Management • Group Management, BPR (Business Process Reengineering) • ABC (Activity Based Costing) • ABM (Activity Based Management) • Human Resource Management • Group Management System											x																							
198	Project Management	Technology		Information System Management	-Software Engineering	• IT Standardization Techniques • Development Techniques • Development Support Tools and Techniques • Programming Techniques • Test Techniques • Reuse Techniques • Security and Privacy • Security Tools and Techniques • External Design • Internal Design • Object Oriented Development • Programming Techniques • Debug Techniques											x																							
199	Project Management	Technology		Communication Environment Design and Operation Management	-Understanding of Communications Industry Trends												x																							
200	Project Management	Technology		Communication Environment Design and Operation Management	-Utilization and Practice of Network Equipment Related Knowledge												x																							
201	Project Management	Technology		Communication Environment Design and Operation Management	-Utilization and Practice of Network Management Technology												x																							
202	Project Management	Technology		Communication Environment Design and Operation Management	-Utilization and Practice of Network Protocol Related Knowledge												x																							
203	Project Management	Technology		Communication Environment Design and Operation Management	-Understanding and Utilization of Network Technology	• Protocol and Transmission Control • Encoding and Transmission • Network Related Regulations • Network Security • Communication Equipment • Internet • Network Software • Line-related Technology (ATM, Frame Relay, LAN, WAN, etc) • TCP/IP											x																							

No	Job Category	Skill Category	Skill Item		Knowledge Item		Specialty Field																																			
							Marketing			Sales		Consultant		IT Architect		Project Management		IT Specialist					Application Specialist		Software Development		Customer Service		IT Service Management			Education										
			Common Skill Item	Specialty Field Specific Skill Item	Knowledge Item (Middle Item)	Knowledge Item (Minor Item)	Marketing Management	Sales Channel Strategy	Market Communication	Consulting Sales by Visiting Customers	Product Sales by Visiting Customers	Sales via Media	Industry	Business Function	Application Architecture	Integration Architecture	Infrastructure Architecture	Systems Development	IT Outsourcing	Network Service	Software Product Development	Platform	Network	Database	Common Application Infrastructure	Systems Management	Security	Business Application System	Business Application Package	Operating System	Middleware	Application Software	Hardware	Software	Facility Management	Operations Management	System Operation	Operation	Service Desk	Training Planning	Instructions	
204	Project Management	Technology		Communication Environment Design and Operation Management	-Requirement Definition Techniques	•Existing Operating Analysis •Understanding of New Operating Requirements •Definition of Operating Requirements •Analysis of Existing IT Environment •Understanding of New Technical Requirements •Definition of Technical Requirements •Utilization and Implementation of Interview Techniques •Creation of Requirements Definition												x																								
205	Project Management	Technology		Communication Environment Design and Operation Management	-Network System Implementation Technology	•Network Protocol, Telecommunications Service, Network Equipment and Device, Network Service, Intranet and Extranet												x																								
206	Project Management	Technology		Communication Environment Design and Operation Management	-Operation, Maintenance, and Management of Network Systems	•User Support •Maintenance and Update Policies and Planning •Maintenance and Update Implementation •Backup and Data Restore •Network Systems Composition Management •Network System Monitoring •System Performance Analysis •Analysis and Response of Compromise •Failure Analysis												x																								
207	Project Management	Technology		Communication Environment Design and Operation Management	-Network Systems Assessment	•Utilization and Practice of Monitoring Techniques •Traffic Measurement and Analysis •Utilization and Practice of Simulation Techniques •Utilization and Practice of Performance Analysis Techniques												x																								
208	Project Management	Technology		Communication Environment Design and Operation Management	-Network Modeling Techniques	•Layer Definition •Protocol Definition												x																								
209	Project Management	Technology		Communication Environment Design and Operation Management	-Network Standards	•Understanding and Application of Network Standards												x																								
210	Project Management	Technology		Communication Environment Design and Operation Management	-Technical Problem Solving Method	Utilization and Practice of Technical Problem Solving Method												x																								
211	Project Management	Technology		Communication Environment Design and Operation Management	-Software Engineering	•IT Standardization Techniques •Development Techniques •Development Support Tools and Techniques •Programming Techniques •Test Techniques •Reuse Techniques •Security and Privacy •Security Tools and Techniques •External Design •Internal Design •Object Oriented Development •Programming Techniques •Debug Techniques												x																								
212	Project Management	Technology		Development of New Software and Improvement of Existing Software	-Utilization and Practice of Software Development Techniques													x																								
213	Project Management	Technology		Development of New Software and Improvement of Existing Software	-Customer Environment Management													x																								

No	Job Category	Skill Category	Skill Item		Knowledge Item		Specialty Field																																				
							Marketing			Sales		Consultant		IT Architect		Project Management		IT Specialist					Application Specialist		Software Development		Customer Service		IT Service Management			Education											
			Common Skill Item	Specialty Field Specific Skill Item	Knowledge Item (Middle Item)	Knowledge Item (Minor Item)	Marketing Management	Sales Channel Strategy	Market Communication	Consulting Sales by Visiting Customers	Product Sales by Visiting Customers	Sales via Media	Industry	Business Function	Application Architecture	Integration Architecture	Infrastructure Architecture	Systems Development	IT Outsourcing	Network Service	Software Product Development	Platform	Network	Database	Common Application Infrastructure	Systems Management	Security	Business Application System	Business Application Package	Operating System	Middleware	Application Software	Hardware	Software	Facility Management	Operations Management	System Operation	Operation	Service Desk	Training Planning	Instructions		
214	Project Management	Methodology		Development of New Software and Improvement of Existing Software	-Utilization and Practice of Software Product and Package Software Related Knowledge														x																								
215	Project Management	Technology		Development of New Software and Improvement of Existing Software	-Software Engineering	•IT Standardization Techniques •Development Techniques •Development Support Tools and Techniques •Programming Techniques •Test Techniques •Reuse Techniques •Security and Privacy •Security Tools and Techniques •External Design •Internal Design •Object Oriented Development •Programming Techniques •Debug Techniques														x																							
216	Project Management	Technology		Development of New Software and Improvement of Existing Software	-Requirement Definition Techniques	•Existing Operating Analysis •Understanding of New Operating Requirements •Definition of Operating Requirements •Analysis of Existing IT Environment •Understanding of New Technical Requirements •Definition of Technical Requirements •Utilization and Implementation of Interview Techniques •Creation of Requirements Definition														x																							
217	Project Management	Technology		Development of New Software and Improvement of Existing Software	-Management and Utilization of Knowledge	•Databases Creation from Knowledge (Added Value, Structuring, Sharing) •Utilization of Knowledge •Maintenance and Management of Knowledge •Understanding of Effects, and Improvement Implementation •Business Model Patents														x																							
218	Project Management	Technology		Development of New Software and Improvement of Existing Software	-Technical Problem Solving Method	•Utilization and Practice of Technical Problem Solving Method														x																							
219	Project Management	Project Management	Project Integration Management		-Develop Project Charter	•Project Selection Methods •Project Management Methodology •Project Management Information System (PMIS) •Expert Judgment													x	x	x	x																					
220	Project Management	Project Management	Project Integration Management		-Develop Preliminary Project Scope Statement	•Project Management Methodology •Project Management Information System (PMIS) •Expert Judgment													x	x	x	x																					
221	Project Management	Project Management	Project Integration Management		-Develop Project Management Plan	•Project Management Methodology •Project Management Information System (PMIS) •Expert Judgment													x	x	x	x																					
222	Project Management	Project Management	Project Integration Management		-Direct and Manage Project Execution	•Project Management Methodology •Project Management Information System (PMIS)													x	x	x	x																					
223	Project Management	Project Management	Project Integration Management		-Monitor and Control Project Work	•Project Management Methodology •Project Management Information System (PMIS) •Earned Value Management •Expert Judgment													x	x	x	x																					
224	Project Management	Project Management	Project Integration Management		-Integrated Change Control	•Project Management Methodology •Project Management Information System (PMIS) •Expert Judgment													x	x	x	x																					
225	Project Management	Project Management	Project Integration Management		-Close Project	•Project Management Methodology •Project Management Information System (PMIS) •Expert Judgment													x	x	x	x																					
226	Project Management	Project Management	Project Scope Management		-Scope Planning	•Expert Judgment •Templates, Forms, Standards													x	x	x	x																					

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							Marketing			Sales		Consultant		IT Architect		Project Management			IT Specialist					Application Specialist		Software Development		Customer Service		IT Service Management			Education													
			Common Skill Item	Specialty Field Specific Skill Item	Knowledge Item (Middle Item)	Knowledge Item (Minor Item)	Marketing Management	Sales Channel Strategy	Market Communication	Consulting Sales by Visiting Customers	Product Sales by Visiting Customers	Sales via Media	Industry	Business Function	Application Architecture	Integration Architecture	Infrastructure Architecture	Systems Development	IT Outsourcing	Network Service	Software Product Development	Platform	Network	Database	Common Application Infrastructure	Systems Management	Security	Business Application System	Business Application Package	Operating System	Middleware	Application Software	Hardware	Software	Facility Management	Operations Management	System Operation	Operation	Service Desk	Training Planning	Instructions					
227	Project Management	Project Management	Project Scope Management		-Scope Definition	•Product Analysis •Alternatives Identification •Expert Judgment •Stakeholder Analysis										x	x	x	x																											
228	Project Management	Project Management	Project Scope Management		-Create WBS	•Work Breakdown Structure Templates •Decomposition										x	x	x	x																											
229	Project Management	Project Management	Project Scope Management		-Scope Control	•Change Control System •Variance Analysis •Replanning •Configuration Management System										x	x	x	x																											
230	Project Management	Project Management	Project Scope Management		-Scope Verification	•Inspection										x	x	x	x																											
231	Project Management	Project Management	Project Time Management		-Activity Definition	•Decomposition •Templates •Rolling Wave Planning •Expert Judgment •Planning Component										x	x	x	x																											
232	Project Management	Project Management	Project Time Management		-Activity Sequencing	•Precedence Diagramming Method (PDM) •Arrow Diagramming Method (ADM) •Schedule Network Templates •Dependency Determination •Applying Leads and Lags										x	x	x	x																											
233	Project Management	Project Management	Project Time Management		-Activity Resource Estimating	•Expert Judgment •Alternatives Analysis •Published Estimating Data •Project Management Software •Bottom-up Estimating										x	x	x	x																											
234	Project Management	Project Management	Project Time Management		-Activity Duration Estimating	•Expert Judgment •Analogous Estimating •Parametric Estimating •Three-point Estimates •Reserve Analysis										x	x	x	x																											
235	Project Management	Project Management	Project Time Management		-Schedule Development	•Schedule Network Analysis •Critical Path Method •Schedule Compression •What-if Scenario Analysis •Resource Leveling •Critical Chain Method •Project Management Software •Applying Calendars •Adjusting Leads and Lags •Schedule Model										x	x	x	x																											
236	Project Management	Project Management	Project Time Management		-Schedule Control	•Progress Reporting •Schedule Change Control System •Performance Measurement •Project Management Software •Variance Analysis •Schedule Comparison Bar Charts										x	x	x	x																											
237	Project Management	Project Management	Project Cost Management		-Cost Estimating	•Analogous Estimating •Determine Resource Cost Rates •Bottom-up Estimating •Parametric Estimating •Project Management Software •Vendor Bid Analysis •Reserve Analysis •Cost of Quality										x	x	x	x																											
238	Project Management	Project Management	Project Cost Management		-Cost Budgeting	•Cost Aggregation •Reserve Analysis •Parametric Estimating •Funding Limit Reconciliation										x	x	x	x																											
239	Project Management	Project Management	Project Cost Management		-Cost Control	•Cost Change Control System •Performance Measurement Analysis •Forecasting •Project Performance Reviews •Project Management Software •Variance Management										x	x	x	x																											

No	Job Category	Skill Category	Skill Item		Knowledge Item		Specialty Field																																			
							Marketing			Sales		Consultant	IT Architect		Project Management			IT Specialist					Application Specialist		Software Development		Customer Service		IT Service Management			Education										
			Common Skill Item	Specialty Field Specific Skill Item	Knowledge Item (Middle Item)	Knowledge Item (Minor Item)	Marketing Management	Sales Channel Strategy	Market Communication	Consulting Sales by Visiting Customers	Product Sales by Visiting Customers	Sales via Media	Industry	Business Function	Application Architecture	Integration Architecture	Infrastructure Architecture	Systems Development	IT Outsourcing	Network Service	Software Product Development	Platform	Network	Database	Common Application Infrastructure	Systems Management	Security	Business Application System	Business Application Package	Operating System	Middleware	Application Software	Hardware	Software	Facility Management	Operations Management	System Operation	Operation	Service Desk	Training Planning	Instructions	
240	Project Management	Project Management	Project Quality Management		-Quality Planning	•Cost-benefit Analysis •Benchmarking •Design of Experiments •Cost of Quality(COQ) •Additional Quality Planning Tools										x	x	x	x																							
241	Project Management	Project Management	Project Quality Management		-QA (Perform Quality Assurance)	•Quality Planning Tools and Techniques •Quality Audits •Process Analysis •Quality Control Tools and Techniques										x	x	x	x																							
242	Project Management	Project Management	Project Quality Management		-QC (Perform Quality Control)	•Cause and Effect of Diagram •Control Charts •Flowcharting •Histogram •Pareto Chart •Run Chart •Scatter Diagram •Statistical Sampling •Inspection •Defect Repair Review										x	x	x	x																							
243	Project Management	Project Management	Project Human Resource Management		-Human Resource Planning	•Organization Charts and Position Descriptions •Networking •Organizational Theory										x	x	x	x																							
244	Project Management	Project Management	Project Human Resource Management		-Acquire Project Team	•Pre-Assignment •Negotiation •Acquisition •Virtual Teams										x	x	x	x																							
245	Project Management	Project Management	Project Human Resource Management		-Develop Project Team	•General Management Skills •Training •Team-Building Activities •Ground Rules •Co-Location •Recognition and Rewards										x	x	x	x																							
246	Project Management	Project Management	Project Human Resource Management		-Manage Project Team	•Observation and Conversation •Project Performance Appraisals •Conflict Management •Issue Log										x	x	x	x																							
247	Project Management	Project Management	Project Communications Management		-Communications Planning	•Communications Requirements Analysis •Communications Technology										x	x	x	x																							
248	Project Management	Project Management	Project Communications Management		-Information Distribution	•Communications Skills •Information Gathering and Retrieval Systems •Information Distribution Methods •Lessons Learned Process										x	x	x	x																							
249	Project Management	Project Management	Project Communications Management		-Performance Reporting	•Information Presentation Tools •Performance Information gathering and Compilation •Status Review Meetings •Time Reporting Systems •Cost Reporting Systems										x	x	x	x																							
250	Project Management	Project Management	Project Communications Management		-Manage Stakeholders	•Communications Methods •Issue Logs										x	x	x	x																							
251	Project Management	Project Management	Project Risk Management		-Risk Management Planning	•Planning Meetings and Analysis										x	x	x	x																							
252	Project Management	Project Management	Project Risk Management		-Risk Identification	•Documentation Reviews •Information Gathering Techniques •Checklist Analysis •Assumptions Analysis •Diagramming Techniques										x	x	x	x																							
253	Project Management	Project Management	Project Risk Management		-Qualitative Risk Analysis	•Risk Probability and Impact Assessment •Probability and Impact Matrix •Risk Data Quality Assessment •Risk Categorization •Risk Urgency Assessment										x	x	x	x																							

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							Marketing			Sales		Consultant	IT Architect		Project Management			IT Specialist					Application Specialist		Software Development		Customer Service		IT Service Management			Education								
			Common Skill Item	Specialty Field Specific Skill Item	Knowledge Item (Middle Item)	Knowledge Item (Minor Item)	Marketing Management	Sales Channel Strategy	Market Communication	Consulting Sales by Visiting Customers	Product Sales by Visiting Customers	Sales via Media	Industry	Business Function	Application Architecture	Integration Architecture	Infrastructure Architecture	Systems Development	IT Outsourcing	Network Service	Software Product Development	Platform	Network	Database	Common Application Infrastructure	Systems Management	Security	Business Application System	Business Application Package	Operating System	Middleware	Application Software	Hardware	Facility Management	System Operation	Operations Management	Service Desk	Training Planning	Instructions	
254	Project Management	Project Management	Project Risk Management		-Quantitative Risk Analysis	•Data Gathering and Representation Techniques •Quantitative Risk Analysis and Modeling Techniques										x	x	x	x																					
255	Project Management	Project Management	Project Risk Management		-Risk Response Planning	•Strategies for Negative Risks or Threats •Strategies for Positive Risks or Opportunities •Strategy for Both Threats and Opportunities •Contingent Response Strategy										x	x	x	x																					
256	Project Management	Project Management	Project Risk Management		-Risk Monitoring and Control	•Risk Reassessment •Risk Audits •Variance and Trend Analysis •Technical Performance Measurement •Reserve Analysis •Status Meetings										x	x	x	x																					
257	Project Management	Project Management	Project Procurement Management		-Plan Purchases and Acquisitions	•Make-or-Buy Analysis •Expert Judgment •Contract Types										x	x	x	x																					
258	Project Management	Project Management	Project Procurement Management		-Plan Contracting	•Standard Forms •Expert Judgment										x	x	x	x																					
259	Project Management	Project Management	Project Procurement Management		-Request Seller Responses	•Bidder Conferences •Advertising •Develop Qualified Sellers List										x	x	x	x																					
260	Project Management	Project Management	Project Procurement Management		-Select Sellers	•Weighting System •Independent Estimates •Screening System •Contract Negotiation •Seller Rating Systems •Expert Judgment •Proposal Assessment Techniques										x	x	x	x																					
261	Project Management	Project Management	Project Procurement Management		-Contract Administration	•Contract Change Control System •Buyer-Conducted Performance Review •Inspections and Audits •Performance Reporting •Payment System •Claims Administration •Records Management System •Information Technology										x	x	x	x																					
262	Project Management	Project Management	Project Procurement Management		-Contract Closure	•Procurement Audits •Records Management System										x	x	x	x																					
263	IT Specialist	Technology	Technology		-Latest Technology Trends	•Understanding of Latest Hardware Technology Trends (※Practical Contents including Hands-on) •Understanding of Latest Middleware Technology Trends •Understanding of Latest Platform Technology Trends •Understanding of Latest Network Technology Trends •Understanding of Latest Database Technology Trends •Understanding of Latest Security Technology Trends •Understanding of Latest System Management Technology Trends														x	x	x	x	x	x															
264	IT Specialist	Business/ Industry	Technology		-Latest IT Market Trends	•Understanding of IT Market Scale and Trends Domestic and Abroad •Understanding (and Utilization) of Technology Trends Related to Application •Understanding (and Utilization) of Technology Trends Related to Business Model Patents •Understanding (and Utilization) of Next-Generation E-Business and its Development													x	x	x	x	x	x																
265	IT Specialist	Business/ Industry	Analysis of Business Operations		-General Business Contents	•General Business Contents •Understanding and Utilization of Characteristics •Understanding and Utilization of Industry-Specific Standard Technology													x	x	x	x	x	x																

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							Marketing			Sales		Consultant	IT Architect		Project Management			IT Specialist					Application Specialist		Software Development		Customer Service		IT Service Management			Education										
			Common Skill Item	Specialty Field Specific Skill Item	Knowledge Item (Middle Item)	Knowledge Item (Minor Item)	Marketing Management	Sales Channel Strategy	Market Communication	Consulting Sales by Visiting Customers	Product Sales by Visiting Customers	Sales via Media	Industry	Business Function	Application Architecture	Integration Architecture	Infrastructure Architecture	Systems Development	IT Outsourcing	Network Service	Software Product Development	Platform	Network	Database	Common Application Infrastructure	Systems Management	Security	Business Application System	Business Application Package	Operating System	Middleware	Application Software	Hardware	Software	Facility Management	Operations Management	System Operation	Operation	Service Desk	Training Planning	Instructions	
266	IT Specialist	Business/ Industry	Analysis of Business Operations		-Latest Trends of General Business Operation	•Understanding and Utilization of Industry-Specific Latest Technology Trends •Understanding and Utilization of Industry-Specific System Installation Cases •Internal Control														x	x	x	x	x	x																	
267	IT Specialist	Business/ Industry	Knowledge Management and Utilization		-Management and Utilization of Knowledge	•Databases Creation of Knowledge (Added Value, Structuring, Sharing) •Knowledge Utilization •Maintenance and Management of Knowledge •Effects Understanding, and Improvement •Business Model Patents														x	x	x	x	x	x																	
268	IT Specialist	Methodology	Consulting Techniques Utilization		-Selection and Utilization of Consulting Techniques	•Comparison, Analysis, Selection, and Application of Consulting Techniques •Definition and Practice of Processes •Deliverables Definition														x	x	x	x	x	x																	
269	IT Specialist	Methodology	Utilization of Consulting Techniques		-Understanding and Utilization of Analysis Tools and Models	•Business Life Cycle (Installation Stage, Growth Stage, Maturity Stage, Decline Stage) Models •Product Portfolio Management (PPM) Models •Experience Curve •3C Analysis •SWOT Analysis •7S Models •Michael Porter's Five Forces Model •Value Chain Analysis														x	x	x	x	x	x																	
270	IT Specialist	Technology	Technology		-Basic Knowledge of Product	•Processor •Storage Devices •Printing Devices •Operating System •Database System •Transaction System •Assessment and Selection of Middleware														x	x	x	x	x	x																	
271	IT Specialist	Business/ Industry	Analysis of Business Operations		-Industry Knowledge	•Knowledge Utilization of Industry Specific Application •Industry Business Trend, Technology Trend, Understanding of Competition Status •Understanding and Utilization of Industry Terms and Relevant Regulations •Understanding and Utilization of Industry Specific Business Environments •Understanding and Utilization of Industry Specific Business Practice •Understanding and Utilization of Industry Specific Business Contents •Knowledge Utilization of Industry Common Applications														x	x	x	x	x	x																	
272	IT Specialist	Technology	Technology		-Basis of Computer Science	•Basic Theory of Information •Data Structures and Algorithms •Objective-Oriented Approach														x	x	x	x	x	x																	
273	IT Specialist	Technology	Technology		-Computer System Structure	•System Components, System Combination, Positioning of Each Component •Hardware •Operating System •Database •System Processing Form •System Performance, Reliability														x	x	x	x	x	x																	
274	IT Specialist	Technology	Technology		-Understanding and Utilization of Network Technology	•Protocol and Transmission Control •Encoding and Transmission •TCP/IP •Network Related Regulations •Network Security •Communication Equipment (Router, etc) •Internet •ATM (Asynchronous Transfer Mode), Line-related Technology such as Frame Relay														x	x	x	x	x	x																	
275	IT Specialist	Technology	Technology		-Internet Technology	•Internet History •Web Related Technologies •Technologies relating to Mails •Cryptographic Technology •Digital Media Related Technology (VoIP, Streaming, QoS, etc)														x	x	x	x	x	x		x															

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							Marketing			Sales		Consultant		IT Architect		Project Management		IT Specialist				Application Specialist		Software Development		Customer Service		IT Service Management			Education								
			Marketing Management	Sales Channel Strategy	Market Communication	Consulting Sales by Visiting Customers	Product Sales by Visiting Customers	Sales via Media	Industry	Business Function	Application Architecture	Integration Architecture	Infrastructure Architecture	Systems Development	IT Outsourcing	Network Service	Software Product Development	Platform	Network	Database	Common Application Infrastructure	Systems Management	Security	Business Application System	Business Application Package	Operating System	Middleware	Application Software	Hardware	Software	Facility Management	Operations Management	System Operation	Operation	Service Desk	Training Planning	Instructions		
276	IT Specialist	Technology	Technology		-System Management	•ITIL Fundamentals •Significance of IT Service Management and IT Infrastructure •Interface between Service Management Process and Process •Relation between ITIL Process and Process											x	x	x	x	x	x																	
277	IT Specialist	Technology	Technology		-Relational Database Fundamentals	•SQL											x	x	x	x	x	x																	
278	IT Specialist	Technology	Technology		-Security and Personal Information	•Security Measures •Privacy Protection •Risk Management •Guidelines and Relevant Regulations											x	x	x	x	x	x																	
279	IT Specialist	Technology	Software Engineering		-Application Development Process	•Requirement Definition •Data Modeling •External Design •Internal Design •Development Environment Design •Production •Test •Maintenance												x	x	x	x	x																	
280	IT Specialist	Technology	Software Engineering		-Application Development Technology	•Development Technique •Design Technique •Requirements •Modeling Techniques and Description Techniques (ER Diagram, etc) •Programming Language, Markup Language •Programming Technology •Development Support Tool •Standardization •Reuse Technique •Test Technique •Utilization and Practice of Verification Techniques												x	x	x	x	x																	
281	IT Specialist	Technology	Technology		-Problem Solving Techniques	•KJ Method •New 7QC Tools •Divide and Conquer Method •Prototyping •Benchmark •Modeling												x	x	x	x	x																	
282	IT Specialist	Technology	Technology		-IT Infrastructure Development Process	•Security Policies and Formulation of Measurement Criteria •System Plan Formulation •System Requirements Definition •System Architecture Design •Transition Design •Development and Test •Maintenance •Fault Management •System Assessment and Improvement •Security Audit												x	x	x	x	x																	
283	IT Specialist	Business/ Industry	Analysis of Business Operations		-Business Knowledge	•Informatization and Operation •Industry Knowledge												x	x	x	x	x	x																
284	IT Specialist	Technology	Technology		-Basis of System Non-Functional Requirement	•Reliability •Availability •Expandability •Capacity •Security												x	x	x	x	x	x																
285	IT Specialist	Business/ Industry	Analysis of Business Operations		-Compliance and Regulations	•Intellectual Property •Security Related Regulations •Labour Related Regulations •Transaction Related (Subcontracting Laws, Dispatch Laws) •Other Laws												x	x	x	x	x	x																
286	IT Specialist	Technology		Platform System Architecture	-System Architecture Design Methods	•Reliability Enabling Technology •Performance Design Technology (Performance and Capacity Related Design Technology and Estimating Technology) •System Architecture Design Technology												x																					

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							Marketing			Sales		Consultant	IT Architect			Project Management			IT Specialist					Application Specialist		Software Development		Customer Service		IT Service Management			Education								
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287	IT Specialist	Technology		Platform System Architecture	-Platform Requirement Definition Techniques	•Availability Requirement •Performance Requirement •Expandability Requirement •Security Requirement (User Definition, Authority Definition) •Capacity Requirement														x																					
288	IT Specialist	Technology		Platform System Architecture	-Platform Design Techniques	•Availability Design •Performance Design •Expandability Design •Security Design (User Design, Authorization Design) •Capacity Design														x																					
289	IT Specialist	Technology		Platform System Architecture	-Platform Implementation Technologies	•Architecture Parameter Design (Hardware, OS, Middleware, etc) •Architecture Working Design (Architecture Procedure Design, Work Instruction Preparation, etc) •Platform Test Design (Test Case Preparation, Work Instruction Preparation, etc)														x																					
290	IT Specialist	Technology		Platform System Architecture	-Platform Architecture Technologies	•Product Installation Technology •Architecture Parameter Setup •Test Techniques for Platform Architecture														x																					
291	IT Specialist	Technology		Platform Product Utilization Technology	-Product Knowledge (Platform)	•Hardware (Server, Storage, etc) •Operating System (Mainframe, Small Business Computer, Unix, Windows, Linux, etc) •Middleware (Cluster Middleware, Database Management System (DBMS), WEB Server, AP Server, etc) •Backup Tools •Operating Management Tools •Test Tools														x																					
292	IT Specialist	Technology		Platform Component Related Technology	-Platform Technology	•Server (Architecture and Operating Principle) •Storage (Architecture and Operating Principle) •Operating System (Architecture and Operating Principle) •File System (Architecture and Operating Principle) •System Operation Management Technology (Operating Techniques, Management Techniques, Maintenance Technology, Backup/Recovery Techniques, Disaster Recovery Technology, etc)														x																					
293	IT Specialist	Technology		Platform Component Related Technology	-Middleware Technology	•Database Management System •Transaction-Processing Techniques •System Linkage Technology (Messaging, File Exchange, etc) •Distributed Processing Technology •Parallel Processing Technology														x																					
294	IT Specialist	Technology		Platform Component Related Technology	-System Diagnostic Techniques and Failure Measure Technology	•System Monitoring Technology •System Analysis and Diagnostic Technology •Failure Recovery Technology														x																					
295	IT Specialist	Technology		Network System Architecture	-Requirement Definition of Network System	•Application Requirement Analysis •Existing Network System Analysis (Traffic, Physical and Logical Composition, etc) •Work Scope Definition •Requirement Definition for Network System •Network related Laws and Regulations															x																				
296	IT Specialist	Technology		Network System Architecture	-Network Design	•Physical Design (Topology, Lines, Node, etc) •Logical Design (Protocol, Address, Routing, QoS, etc) •Reliability Design (Redundancy, etc) •Parameter Design •Work Procedure Documentation															x																				
297	IT Specialist	Technology		Network System Architecture	-Network System Installation and Migration	•Installation •Test and Assessment •Migration •Utilization of Network Verification Tools •Problem Determination, Utilization and Practice of Troubleshooting Techniques															x																				

No	Job Category	Skill Category	Skill Item		Knowledge Item		Specialty Field																																		
							Marketing			Sales		Consultant	IT Architect		Project Management			IT Specialist				Application Specialist		Software Development		Customer Service		IT Service Management			Education										
			Common Skill Item	Specialty Field Specific Skill Item	Knowledge Item (Middle Item)	Knowledge Item (Minor Item)	Marketing Management	Sales Channel Strategy	Market Communication	Consulting Sales by Visiting Customers	Product Sales by Visiting Customers	Sales via Media	Industry	Business Function	Application Architecture	Integration Architecture	Infrastructure Architecture	Systems Development	IT Outsourcing	Network Service	Software Product Development	Platform	Network	Database	Common Application Infrastructure	Systems Management	Security	Business Application System	Business Application Package	Operating System	Middleware	Application Software	Hardware	Software	Facility Management	Operations Management	System Operation	Operation	Service Desk	Training Planning	Instructions
298	IT Specialist	Technology		Network System Architecture	-Operation, Maintenance and Management of Network System	•Policies of Maintenance and Update, and Plan Creation •Implementation of Maintenance and Update •Backup and Data Recovery •Network System Configuration Management •Network System Monitoring •System Performance Analysis •Compromise Analysis and Response •Fault Analysis															x																				
299	IT Specialist	Technology		Network Product Utilization Technology	-Network System Technology Trends	•Understanding of Large Scale Networking (Broadband ISDN, Optical Networking, Telephone Cable, Wireless Network, Backbone Network) Technology Trend •Understanding of Hi-speed LAN (DQDB(Distributed Queue Dual Bus), Gigabit Ethernet) Technology Trend •Understanding of Communication Service (Gigabit Ethernet, Continuous Connection Service,																x																			
300	IT Specialist	Technology		Network Product Utilization Technology	-Network Product Knowledge	•Utilization of Network Product Knowledge •Lines •Load Balancer •Mobile (PDA, Mobile Phone) •L2Switch, L3Switch, Router, •VPN Gateway, VoIP Gateway •Wireless LAN, IPPBX, IPTelephone •Cable •Network Management Tools •Finder, Traffic Generator •Network Simulator, etc.																x																			
301	IT Specialist	Technology		Network Component Related Technology	-Network Standards	•Understanding and Application of Network Standards																x																			
302	IT Specialist	Technology		Database System Architecture	-Database Requirement Definition	•Current Situation Survey and Issue Analysis •Database Design Requirement Definition •Definition of Database Operation Management Requirement																	x																		
303	IT Specialist	Technology		Database System Architecture	-Logical Database Design Technology	•ER Design •Normalization •Key Design •Table Design •Index Design •View Design •Integrity Restriction •Data Dictionary, Repository Management •Renormalization •Data Physical Deployment Design •Database Log Design •Data Capacity Estimation •Data Storage Area Design •Memory Cache Design •Database Security Design •Character Code Design •DBMS Configuration Parameter Design																	x																		
304	IT Specialist	Technology		Database System Architecture	-Transaction Design Technology	•Transaction Definition (ACID Characteristics, Commit/Roll Back) •Transaction Concurrency Control (Isolation Level, Locks) •Transaction Recovery (Transaction Log Design)																	x																		
305	IT Specialist	Technology		Database System Architecture	-Reliability Design of Database System	•Database High Availability Design •Database Disaster Prevention Design																	x																		
306	IT Specialist	Technology		Database System Architecture	-Data Migration Design	•Definition of Migration Specification •Migration Procedure Design and Creation •Migration Tool Design																	x																		
307	IT Specialist	Technology		Database System Architecture	-Database Operation Design	•Backup/Restore Method •Database Control Method																	x																		

No	Job Category	Skill Category	Skill Item		Knowledge Item		Specialty Field																																		
							Marketing			Sales		Consultant	IT Architect		Project Management		IT Specialist				Application Specialist		Software Development		Customer Service		IT Service Management			Education											
			Common Skill Item	Specialty Field Specific Skill Item	Knowledge Item (Middle Item)	Knowledge Item (Minor Item)	Marketing Management	Sales Channel Strategy	Market Communication	Consulting Sales by Visiting Customers	Product Sales by Visiting Customers	Sales via Media	Industry	Business Function	Application Architecture	Integration Architecture	Infrastructure Architecture	Systems Development	IT Outsourcing	Network Service	Software Product Development	Platform	Network	Database	Common Application Infrastructure	Systems Management	Security	Business Application System	Business Application Package	Operating System	Middleware	Application Software	Hardware	Software	Facility Management	Operations Management	System Operation	Operation	Service Desk	Training Planning	Instructions
308	IT Specialist	Technology		Database System Architecture	-Implementation and Test to Database Management System (DBMS)	•Database Creation •Table Creation •Index Creation •View Creation •Authorization Setting •Creation of Data Migration Tool and Data Load •Database Architecture Script Creation •Test and Assessment																	x																		
309	IT Specialist	Technology		Database System Architecture	-Database Operation Technology	•Backup/Restore •Database Reconfiguration/Statistical Information Acquisition •Performance Monitoring																		x																	
310	IT Specialist	Technology		Database System Architecture	-Database Operation Design	•Patch Application, Version-Up Method																		x																	
311	IT Specialist	Technology		Utilization Technology of Database Product	-Utilization Technology of Database Related Product	•Database Management System •Database Management Tool •Backup Tool •Database Monitoring Tool •Database Tuning Tool •Database Access API (JDBC, ODBC, DAO, etc) •Transaction Monitor •Database Security Tool •Modeling Tool •ETL Tool •BI Tool •Database Duplication Tool •Job Management Tool																		x																	
312	IT Specialist	Technology		Database Component Related Technology	-Significant Technology of Database Development	•Distributed Database •Database Security (Access Control/SQL Injection) •Japanese Character Code System/ Font/ Code Conversion/ Extended Characters •Storage Utilization Technology, File System Utilization Technology •ANSI/ X3/ SPARC 3-Layer Schema																		x																	
313	IT Specialist	Technology		Database Component Related Technology	-Conceptual Data Modeling Techniques	•ER Chart •Entity and Attribution •Primary Key and Foreign Key •Cardinality •Normalization																			x																
314	IT Specialist	Technology		Database Component Related Technology	-Database Related Technology Trends	•Object Oriented Database •Object Relational Database •XML Database, X Query, X Path •Data Warehouse, OLAP, Data Mining																			x																
315	IT Specialist	Technology		Database Component Related Technology	-Relational Model	•Relational Algebra •Relation, Domain, Tapple, Attribution •Primary Key, Foreign Key, Integrity Restriction •Normalization																				x															
316	IT Specialist	Technology		Database Component Related Technology	-SQL	•DDL, DML, DCL •Database Definition •Retrieval, Conditional Retrieval •Connection •Data Manipulation (Insert, Update, Delete) •Locks •Integrity Restrictions •View •Trigger •Procedure •Cursor •Embedded SQL, Dynamic SQL																				x															
317	IT Specialist	Technology		Database Component Related Technology	-Database Diagnostic Techniques and Tuning Techniques	•Database Analysis Techniques (OS resource Usage, DBMS Resource Usage) •Database Tuning Technology (Resource Adjustment, SQL Tuning)																				x															

№	Job Category	Skill Category	Skill Item		Knowledge Item		Specialty Field																																		
							Marketing			Sales		Consultant	IT Architect		Project Management			IT Specialist					Application Specialist		Software Development		Customer Service		IT Service Management			Education									
			Common Skill Item	Specialty Field Specific Skill Item	Knowledge Item (Middle Item)	Knowledge Item (Minor Item)	Marketing Management	Sales Channel Strategy	Market Communication	Consulting Sales by Visiting Customers	Product Sales by Visiting Customers	Sales via Media	Industry	Business Function	Application Architecture	Integration Architecture	Infrastructure Architecture	Systems Development	IT Outsourcing	Network Service	Software Product Development	Platform	Network	Database	Common Application Infrastructure	Systems Management	Security	Business Application System	Business Application Package	Operating System	Middleware	Application Software	Hardware	Software	Facility Management	Operations Management	System Operation	Operation	Service Desk	Training Planning	Instructions
318	IT Specialist	Technology		Establishment of Application Common Infrastructure System	-Application Method Design Techniques	•Common Function Design (User Authentication, Application Log Design, etc) •Linkage Design among Systems •Object Design •Framework Design, Assessment Techniques •Development Tools Assessment Techniques •Development Standardization Techniques (Design, Coding, Test) •Configuration and Change Management Techniques																		x																	
319	IT Specialist	Technology		Establishment of Application Common Infrastructure System	-Requirement Definition Techniques of Application Common Infrastructure	•Availability Requirement •Performance Requirement •Expandability Requirement •Security Requirement •Other System Linkage Interface Requirement •Transaction Requirement •Database Access Requirement •Application Maintenance Requirement																			x																
320	IT Specialist	Technology		Establishment of Application Common Infrastructure System	-Application Common Infrastructure Design Techniques	•Availability Design •Performance Design •Expandability Design •Security Design •Other System Linkage Interface Design •Transaction Design •Database Access Design •Application Maintenance Design •Framework Expansion Design •Common Library Design																				x															
321	IT Specialist	Technology		Application Common Infrastructure Component Related Technology	-Legacy Migration Techniques	•Utilization Techniques of Static Code Analysis Tools •Utilization Techniques of Program Language Conversion Tools																				x															
322	IT Specialist	Technology		Application Common Infrastructure Component Related Technology	-Object Oriented Techniques	•UML •Object Oriented Design Techniques •Object Oriented Development Techniques •Object Oriented Languages •Design Patterns •Component Design Technology																				x															
323	IT Specialist	Technology		Application Common Infrastructure Component Related Technology	-Framework Component Techniques	•MVC Model •OR Mapping •DI (Dependency Injection) •AOP (Aspect Oriented Programming) •OSS (Open Sources Software)																				x															
324	IT Specialist	Technology		Application Common Infrastructure Component Related Technology	-Linkage Techniques among Systems	•Distributed Programming •Transaction Management •2-Phase Commit •Messaging Techniques •XML •WEB Service																				x															
325	IT Specialist	Technology		System Management System Architecture	-Operation Related System Assessment	•Analysis Techniques of System Operation Management •Assessment Techniques of System Operation Management •Risk Analysis																				x															
326	IT Specialist	Technology		System Management System Architecture	-System Management Plan	•Management Policy of System Operation •Cost Estimate for System and Service Provision •Policy Decision of User Service Level •Service Desk •SLA																				x															
327	IT Specialist	Technology		System Management System Architecture	-System Operational Method Techniques	•System Operational Management Method (Job Automatic Control, etc) •Monitoring Method (Operation Monitoring, Failure Monitoring, Performance Monitoring, Threshold Monitoring) •Backup and Recovery Method																				x															

No	Job Category	Skill Category	Skill Item		Knowledge Item		Specialty Field																																			
							Marketing			Sales		Consultant		IT Architect		Project Management		IT Specialist					Application Specialist		Software Development		Customer Service		IT Service Management			Education										
			Common Skill Item	Specialty Field Specific Skill Item	Knowledge Item (Middle Item)	Knowledge Item (Minor Item)	Marketing Management	Sales Channel Strategy	Market Communication	Consulting Sales by Visiting Customers	Product Sales by Visiting Customers	Sales via Media	Industry	Business Function	Application Architecture	Integration Architecture	Infrastructure Architecture	Systems Development	IT Outsourcing	Network Service	Software Product Development	Platform	Network	Database	Common Application Infrastructure	Systems Management	Security	Business Application System	Business Application Package	Operating System	Middleware	Application Software	Hardware	Software	Facility Management	Operations Management	System Operation	Operation	Service Desk	Training Planning	Instructions	
328	IT Specialist	Technology		System Management System Architecture	-System Operational Management Design	•Monitoring Method (Operation Monitoring, Failure Monitoring, Performance Monitoring, Threshold Monitoring) •Normal and Abnormal Operation Method and Operation Flow Design •Service Level Management Design •Incident Management and Issue Management Process Design •Backup and Recovery Method •Job Net Management Method •Log Rotation, Backup, Switching, Reference Method •Shell Script Design																			x																	
329	IT Specialist	Technology		System Management System Architecture	-Operating System Architecture	•Job Automatic Control Method, Abnormal Response •Parameter Design of Operational Management Software(Threshold Setting, etc) •Filtering Techniques of Monitoring Message (Know-How) •Log Rotation, Backup, and Switching Formulations •Operation Test Techniques •Shell Script Creation																				x																
330	IT Specialist	Technology		System Management System Architecture	-Maintenance Techniques	•Maintenance Techniques																				x																
331	IT Specialist	Technology		Utilization Technology of System Management Product	-Operation Management Software Products	•Monitoring Tools •Job Implementation Management Tools •Remote Manipulation Tools •Distribution Tools •Information Collection Tools (Log Collection) •Backup and Recovery Tools •Incident Management Tools •Facility •Equipment •Maintenance Tools •Migration Support Tools																				x																
332	IT Specialist	Technology		System Management Component Related Technology	-Service Delivery	•Service Level Management (including Performance Management) •Financial Management for IT Service •Capacity Management •Availability Management •IT Service Continuity Management																				x																
333	IT Specialist	Technology		System Management Component Related Technology	-System Operation	•Monitoring •Operation/Job Management •Service Delivery (System Deployment, Relocation, Change, and Operating Procedure from start to end) •Backup/Recovery •Business Operation •System Operation •Log Collection and Utilization •User Management																				x																
334	IT Specialist	Technology		System Management Component Related Technology	-System Maintenance Standards	•Maintenance Standards(Target, Scope, Cycle) •Maintenance Procedure Standards (Application and Acceptance Procedure)																				x																
335	IT Specialist	Technology		System Management Component Related Technology	-Contingency Planning	•Contingency Planning																				x																
336	IT Specialist	Technology		System Management Component Related Technology	-Operating System Improvement	•Operating System Improvement Techniques																				x																
337	IT Specialist	Methodology		System Management Component Related Technology	-System Investment Assessment Techniques	•Investment Evaluation Techniques of Information System																				x																

№	Job Category	Skill Category	Skill Item		Knowledge Item		Specialty Field																																			
							Marketing			Sales		Consultant		IT Architect		Project Management			IT Specialist					Application Specialist		Software Development		Customer Service		IT Service Management			Education									
			Common Skill Item	Specialty Field Specific Skill Item	Knowledge Item (Middle Item)	Knowledge Item (Minor Item)	Marketing Management	Sales Channel Strategy	Market Communication	Consulting Sales by Visiting Customers	Product Sales by Visiting Customers	Sales via Media	Industry	Business Function	Application Architecture	Integration Architecture	Infrastructure Architecture	Systems Development	IT Outsourcing	Network Service	Software Product Development	Platform	Network	Database	Common Application Infrastructure	Systems Management	Security	Business Application System	Business Application Package	Operating System	Middleware	Application Software	Hardware	Software	Facility Management	Operations Management	System Operation	Operation	Service Desk	Training Planning	Instructions	
338	IT Specialist	Methodology		System Management Component Related Technology	-System Audit Techniques	•Audit Techniques of System Operation																			x																	
339	IT Specialist	Technology		Security System Architecture	-Security Policy Formulation	•Assessment Techniques of Information Asset •Threat Awareness Techniques •Risk Identification Techniques •Measure arrangement and Investigation Techniques •Risk Assessment Techniques •Formulation Techniques of Security Policies																				x																
340	IT Specialist	Technology		Security System Architecture	-Formulation of Security Standards	•Security Standards Creation Techniques																				x																
341	IT Specialist	Technology		Security System Architecture	-Security System Planning	•Planning Techniques •Analysis Techniques																				x																
342	IT Specialist	Technology		Security System Architecture	-Security System Requirement Definition	•Requirement Definition Technique •Requirement Assessment Technique •Creation Techniques of Requirements Definition Document																				x																
343	IT Specialist	Technology		Security System Architecture	-Security System Design	•Control Techniques for Authentication and Authorization •Physical Security Control Techniques •Logical Security Control Techniques •Data Reliability Assurance Technology on Network Infrastructure •Creation Techniques of Security Operating Procedure																				x																
344	IT Specialist	Technology		Security System Architecture	-Implementation and Inspection of Security System	•Selection Techniques and Installation Techniques of Security Products •Security System Development Technology •Security Implementation and Inspection Technology																				x																
345	IT Specialist	Technology		Security System Architecture	-Security System Installation Assistance	•User Education and Training Techniques •User Support Techniques																				x																
346	IT Specialist	Technology		Security System Architecture	-Security System Operating Management	•Security Operating Techniques •System Maintenance Techniques																				x																
347	IT Specialist	Technology		Security System Architecture	-Security Failure (Incidents and Accidents)	•Urgent Response Techniques for Security Failure (Incidents and Accidents)																				x																
348	IT Specialist	Technology		Security System Architecture	-Security Analysis	•Security Monitoring Techniques •Accident Detection Techniques •Accident Treatment Techniques •Accident Analysis Techniques •Restoration Techniques for Accidents •Recurrence Prevention Techniques •Security Assessment Techniques																				x																
349	IT Specialist	Technology		Security System Architecture	-Security Review (Assessment and Improvement of Security System)	•Assessment Technique of Technical Information •Issues Clarification and Analysis Techniques •Risk Arrangement and Analysis Techniques																				x																

No	Job Category	Skill Category	Skill Item		Knowledge Item		Specialty Field																																			
							Marketing			Sales		Consultant		IT Architect		Project Management		IT Specialist					Application Specialist		Software Development		Customer Service		IT Service Management			Education										
			Common Skill Item	Specialty Field Specific Skill Item	Knowledge Item (Middle Item)	Knowledge Item (Minor Item)	Marketing Management	Sales Channel Strategy	Market Communication	Consulting Sales by Visiting Customers	Product Sales by Visiting Customers	Sales via Media	Industry	Business Function	Application Architecture	Integration Architecture	Infrastructure Architecture	Systems Development	IT Outsourcing	Network Service	Software Product Development	Platform	Network	Database	Common Application Infrastructure	Systems Management	Security	Business Application System	Business Application Package	Operating System	Middleware	Application Software	Hardware	Software	Facility Management	Operations Management	System Operation	Operation	Service Desk	Training Planning	Instructions	
350	IT Specialist	Technology		Security System Architecture	-Implementation and Assistance of Information Security Audit	•Security Audit Techniques •Firewall •IDS/IPS •SSL Accelerator •Authentication System (RADIUS, etc) •VPN •One-Time Password Devices •Biometrics Authentication •Quarantine LAN System •Censorship System •Security Gate •Virus Detection •Anti-Spyware Tools •Email Audit •Patch Distribution •Software Installation Monitoring •Disk Encryption •Entry/Exit Card •Monitoring Camera •Forensic Tool																			x																	
351	IT Specialist	Business/ Industry		Security Component Related Technology	-Industry Specific Security Requirement and Cases	•Industry Standards, Industry Criteria, Messages																				x																
352	IT Specialist	Methodology		Security Component Related Technology	-Consulting Implementation	•Utilization of Consulting Techniques •Establishment and Maintenance of Customer Relationship •Analysis and Design Techniques of Business Process																					x															
353	IT Specialist	Technology		Security Component Related Technology	-Security Technique Trends	•Single Sign-On •PKI •Security Administration •Intrusion Prevention •Encryption •Electronic Signature •Firewall •Fortification (Hardening) •Zoning																					x															
354	IT Specialist	Technology		Security Component Related Technology	-Security and Personal Information	•Security Measures •Secret Preservation •Measures for Prevention of Falsification •Intrusion Prevention •Computer Virus •Integrity Measures •Availability Measures •Safety Measures •Social Engineering •Privacy Protection •Risk Management •Guidelines and Relevant Regulations																					x															
355	IT Specialist	Technology		Security Component Related Technology	-Computer Forensics (Tracking for Preservation of Evidence)	•Computer Forensics (Tracking for Preservation of Evidence)																					x															
356	Application Specialist	Methodology	Analysis of Business Operations		-Analysis of Business Operation Requirements	•Understanding of User Needs •Needs Analysis and Prioritization																						x		x												
357	Application Specialist	Methodology	Analysis of Business Operations		-Analysis of Technical Requirements	•Existing IT Environmental Analysis •Understanding of New Technical Requirements •Needs Analysis and Prioritization																						x		x												
358	Application Specialist	Business/ Industry	Analysis of Business Operations		-Industry Knowledge	•Knowledge Utilization of Industry Common Applications •Knowledge Utilization of Industry Specific Applications •Understanding of Industry Business Trend, Technology Trend, and Competition Status •Understanding and Utilization of Industry Terms and Relevant Regulations •Understanding and Utilization of Industry Specific Business Environments •Understanding and Utilization of Industry Specific Business Practice •Understanding and Utilization of Industry Specific Business Contents																							x		x											

No	Job Category	Skill Category	Skill Item		Knowledge Item		Specialty Field																																	
							Marketing			Sales		Consultant		IT Architect		Project Management			IT Specialist					Application Specialist		Software Development		Customer Service		IT Service Management			Education							
			Common Skill Item	Specialty Field Specific Skill Item	Knowledge Item (Middle Item)	Knowledge Item (Minor Item)	Marketing Management	Sales Channel Strategy	Market Communication	Consulting Sales by Visiting Customers	Product Sales by Visiting Customers	Sales via Media	Industry	Business Function	Application Architecture	Integration Architecture	Infrastructure Architecture	Systems Development	IT Outsourcing	Network Service	Software Product Development	Platform	Network	Database	Common Application Infrastructure	Systems Management	Security	Business Application System	Business Application Package	Operating System	Middleware	Application Software	Hardware	Facility Management	Operations Management	System Operation	Operation	Service Desk	Training Planning	Instructions
359	Application Specialist	Methodology	Analysis of Business Operations		-Systemization Strategy Formulation	•Understanding of User Vision, Goal and Business Strategies •Systemization Strategy Formulation •Systemization Strategy Formulation Utilizing Application Packages																					x	x												
360	Application Specialist	Methodology	Analysis of Business Operations		-Definition of Platform Requirements	•CPU Performance Estimation •Storage Capacity Estimation •Estimation of Transmission Quantity •Estimation of Transaction Quantity •Response Time Estimation																						x	x											
361	Application Specialist	Methodology	Analysis of Business Operations		-System Value Verification	•IT Value Definition •Framework Development of IT Value Management																						x	x											
362	Application Specialist	Business/ Industry	Analysis of Business Operations		-Informatization and Management	•Information Strategy •Corporate Accounting •Management Engineering •Utilization of Information System in Engineering System Area and Business System Area •Understanding and Compliance of Relevant Regulations																						x	x											
363	Application Specialist	Business/ Industry	Analysis of Business Operations		-General Business Content	•General Business Content •Understanding and Utilization of Characteristics •Understanding and Utilization of Industry Specific Standard Techniques																						x	x											
364	Application Specialist	Business/ Industry	Analysis of Business Operations		-Latest General Business Trends	•Understanding and Utilization of Industry Specific Latest Trend •Understanding and Utilization of Industry Specific System Installation Cases																						x	x											
365	Application Specialist	Technology	Technology		-System Platform Technology	•Utilization and Practice of Operating System Techniques (Mainframe, Dispersion (Office Computer), UNIX, WINDOWS, Linux, etc)																						x	x											
366	Application Specialist	Technology	Technology		-Latest Technology Trends	•Understanding of Latest Hardware Technology Trends •Understanding of Latest Middleware Technology Trends •Understanding of Latest Platform Technology Trends •Understanding of Latest Network Technology Trends •Understanding of Latest Database Technology Trends •Understanding of Latest Security Technology Trends •Understanding of Latest System Management Technology Trends																						x	x											
367	Application Specialist	Technology	Technology		-Latest Trends of Application Package	•Understanding of Latest Application Package Technique Trend •Selection of Optimal Application Package																						x	x											
368	Application Specialist	Technology	Technology		-Computer Science Fundamentals	•Basic Theory of Information •Data Structure and Algorithm																						x	x											
369	Application Specialist	Technology	Technology		-Computer Systems	•Hardware •Operating System •System Structure and Architecture •System Applications																						x	x											
370	Application Specialist	Technology	Technology		-System Development Environment	•System Development Techniques •Understanding and Utilization of Languages, Tools, and Software Packages																						x	x											
371	Application Specialist	Technology	Technology		-Understanding and Utilization of Network Technologies	•Protocol and Transmission Control •Encoding and Transmission •Network Related Regulations •Network Security •Communication Tools •Network Software •Techniques for Lines such as ATM, Frame Relay, LAN, WAN																						x	x											
372	Application Specialist	Technology	Technology		-Database Technologies	•Database Model •Database Languages •Database Control																						x	x											
373	Application Specialist	Technology	Technology		-Database Design	•Database Logical Design •Database Physical Design																						x	x											

No	Job Category	Skill Category	Skill Item		Knowledge Item		Specialty Field																																		
							Marketing			Sales		Consultant		IT Architect		Project Management		IT Specialist					Application Specialist		Software Development		Customer Service		IT Service Management			Education									
			Marketing Management	Sales Channel Strategy	Market Communication	Consulting Sales by Visiting Customers	Product Sales by Visiting Customers	Sales via Media	Industry	Business Function	Application Architecture	Integration Architecture	Infrastructure Architecture	Systems Development	IT Outsourcing	Network Service	Software Product Development	Platform	Network	Database	Common Application Infrastructure	Systems Management	Security	Business Application System	Business Application Package	Operating System	Middleware	Application Software	Hardware	Software	Facility Management	System Operation	Operations Management	Service Desk	Training Planning	Instructions					
374	Application Specialist	Technology	Technology		-Relationship of Synchronization Points between Transaction Processes and Database																																				
375	Application Specialist	Technology	Technology		-Internet Technologies	•Internet History •Techniques for Web •Techniques for Emails •Encoding Techniques •Techniques for Digital Media (VoIP, Streaming, QoS, etc)																																			
376	Application Specialist	Technology	Technology		-Programming Languages/ Markup languages	•Various Languages such as C, C++, COBOL, Java, UML, HTML, XML •Characteristics of Notation •Usage of Graphical Development Environment																																			
377	Application Specialist	Technology	Technology		-Middleware Technologies	•Messaging Techniques •Internet Techniques •Distributed Object Management •Directory Service •Transaction Processing																																			
378	Application Specialist	Technology	Technology		-Basic Function of Relational Database Management Systems	•Basic Structure of Relational Database Systems •Retention Function of System Catalogues •Fetch and Execute Function of Relational Tables •Interpretative Function of Database Utilization Demand •Record Function of Database Utilization •Database Backup and Recovery Function •Integrity Assurance Function																																			
379	Application Specialist	Technology	Technology		-Latest Trends of IT Market	•Understanding of Scale and Trends of IT Market Domestic and Abroad •Understanding and Utilization of Technology Trend relating to Application •Understanding and Utilization of Technology Trend relating to Business Model Patent •Understanding and Utilization of Next Generation E-Business and its Development																																			
380	Application Specialist	Technology	Technology		-System Management Technologies	•System Resource Monitoring Techniques •Process Monitoring Techniques •Interface Technology for System Software and Middleware Management Function •Performance Measurement Techniques •Configuration Management Function for Hardware and Software •Software Distribution Function •Job Management Function •Remote Control Function •Access Management Function •User Management Function •Risk Management Function •Storage Management Function																																			
381	Application Specialist	Technology	Technology		-Platform Technologies	•Hardware Architecture •Storage Management •Operating System •Communication Control •Understanding and Utilization of Transaction Processing, Distribution Processing and Parallel Processing																																			
382	Application Specialist	Technology	Technology		-Product Knowledge (Platforms)	•Assessment and Selection of Processor, Memory Devices, Printing Devices, Operating System, Database System, Transaction System, and																																			

No	Job Category	Skill Category	Skill Item		Knowledge Item		Specialty Field																																						
							Marketing			Sales		Consultant	IT Architect		Project Management		IT Specialist					Application Specialist		Software Development		Customer Service		IT Service Management			Education														
			Common Skill Item	Specialty Field Specific Skill Item	Knowledge Item (Middle Item)	Knowledge Item (Minor Item)	Marketing Management	Sales Channel Strategy	Market Communication	Consulting Sales by Visiting Customers	Product Sales by Visiting Customers	Sales via Media	Industry	Business Function	Application Architecture	Integration Architecture	Infrastructure Architecture	Systems Development	IT Outsourcing	Network Service	Software Product Development	Platform	Network	Database	Common Application Infrastructure	Systems Management	Security	Business Application System	Business Application Package	Operating System	Middleware	Application Software	Hardware	Software	Facility Management	Operations Management	System Operation	Operation	Service Desk	Training Planning	Instructions				
383	Application Specialist	Technology	Technology		-System Management Methods	•Service Level Management •Issues Management •Performance and Capacity Management •Change Control •Resource Management •Recovery Management •Component Management •Operation Management •Selection and Installation of System Management Tools •Implementation of System Management Requirements •Assessment and Selection of Security Management Products																					x	x																	
384	Application Specialist	Technology	Technology		-Selection of Database Management System (DBMS)	•Assessment and Selection of Database Products																						x	x																
385	Application Specialist	Technology	Technology		-Installation of Database Management System (DBMS)	•Installation and Setting of Database Products																						x	x																
386	Application Specialist	Technology	Technology		-Important Techniques for Database Development	•Distributed Database •Database Security •Distributed Computing System •DBMS																						x	x																
387	Application Specialist	Technology	Technology		-Database Related Technology	Data Warehouse, On-line Analysis Processing, Data Mining, Object-Oriented and Database, Internet and DBMS																						x	x																
388	Application Specialist	Technology	Technology		-Database Related Technology Trends	•Object-Oriented Database •Object Relational Database •ERP and Database •SCM and Database •CRM and Database •Understanding and Utilization of EC and Database																						x	x																
389	Application Specialist	Technology	Technology		-Network Systems Technology Trends	•Understanding of Large Scale Networking (Broadband ISDN, Optical Network, Telephone Cable, Wireless Network, Backbone Networking) Technology Trend •Understanding of Hi-speed LAN (DQDB, Gigabit Ethernet) Technology Trend •Understanding of Communication Service (Gigabit Ethernet, Continuous Connection Service, Area IP Network) Technology Trend																						x	x																
390	Application Specialist	Technology	Technology		-Knowledge of Network Products	•Knowledge Utilization of Network Products																						x	x																
391	Application Specialist	Technology	Technology		-Network Standards	•Understanding and Application of Network Standards																						x	x																
392	Application Specialist	Technology	Technology		-Network System Implementation Technology	•Network Protocol, Telecommunication Service, Network Equipment and Devices, Network Service, Intranet, and Extranet																						x	x																
393	Application Specialist	Technology	Technology		-Server Placement Techniques	•Utilization and Practice of Server Placement Techniques																						x	x																
394	Application Specialist	Technology	Technology		-Application Execution Method	Understanding and Utilization of Web Application Methods and Distributed Computing Method																						x	x																
395	Application Specialist	Technology	Technology		-Server Technology	Understanding and Utilization of Technologies for HTTP Server, Application Server and Load Distribution Server																						x	x																
396	Application Specialist	Technology	Technology		-Load Distribution and Availability	•Load Distribution (Hardware, Software) •Clone •Clustering •Network Duplexing																						x	x																

No	Job Category	Skill Category	Skill Item		Knowledge Item		Specialty Field																																				
							Marketing			Sales		Consultant	IT Architect		Project Management		IT Specialist					Application Specialist		Software Development		Customer Service		IT Service Management			Education												
			Common Skill Item	Specialty Field Specific Skill Item	Knowledge Item (Middle Item)	Knowledge Item (Minor Item)	Marketing Management	Sales Channel Strategy	Market Communication	Consulting Sales by Visiting Customers	Product Sales by Visiting Customers	Sales via Media	Industry	Business Function	Application Architecture	Integration Architecture	Infrastructure Architecture	Systems Development	IT Outsourcing	Network Service	Software Product Development	Platform	Network	Database	Common Application Infrastructure	Systems Management	Security	Business Application System	Business Application Package	Operating System	Middleware	Application Software	Hardware	Software	Facility Management	Operations Management	System Operation	Operation	Service Desk	Training Planning	Instructions		
397	Application Specialist	Technology	Technology		-Distributed Computing Development Environments	•Utilization and Practice of Distributed Computing Development Tools •Utilization and Practice of Development Environment, Standards, and Tools of Distributed Computing such as Servlet, JSP, JavaBeans •Utilization and Practice of Development Tools •Understanding and Utilization of Application Development Process and Characteristics																					×	×															
398	Application Specialist	Technology	Technology		-User Interface Technology	•Understanding and Utilization of Web Browser Technology •Understanding and Utilization of Graphical User Interface Technology •Accessibility Function of Information System																						×	×														
399	Application Specialist	Technology	Technology		-Application Security	•Design, Development and Installation of Application Security Function																						×	×														
400	Application Specialist	Technology	Technology		-Understanding and Utilization of Security Technologies	•Single Sign-on Techniques •PKI Techniques •Security Administration Techniques •Intrusion Prevention Techniques •Encryption Techniques •Electronic Signature Techniques •Firewall Techniques																						×	×														
401	Application Specialist	Technology	Technology		-Security Technology Trends	•Understanding of Single Sign-on Techniques Trend •Understanding of PKI Techniques Trend •Understanding of Security Administration Techniques Trend •Understanding of Intrusion Prevention Techniques Trend •Understanding and Utilization of Encryption Techniques •Understanding and Utilization of Electronic Signature Techniques •Understanding and Utilization of Firewall Techniques																						×	×														
402	Application Specialist	Technology	Technology		-Implementation and Inspection of Security Systems	•Selection and Installation of Security Products and Tools •Security System Development •Security Techniques Implementation																						×	×														
403	Application Specialist	Technology	Technology		-Data Modeling	•Utilization and Practice of Data Modeling Techniques •Selection and Utilization of Data Modeling Tools																						×	×														
404	Application Specialist	Technology	Technology		-Database Operation Design	•Performance Design, Failure Measure																						×	×														
405	Application Specialist	Technology	Technology		-Understanding and Utilization of Computer System Architectures and																							×	×														
406	Application Specialist	Methodology	Design		-Requirements Definition	•Clarification of User Demands, Project Scope and Objectives •Project Prioritization and Coordination with related Departments •Implementation of Requirement Investigation •Requirements Definition and Documentation •Resource Request Investigation •Systemization Planning																						×	×														
407	Application Specialist	Methodology	Design		-Design of Development Environment for Industrial Package	•Definition of Development Environmental Requirement •Platform Selection																						×	×														
408	Application Specialist	Methodology	Design		-Development Environmental Design	•Definition of Development Environment Requirements																						×	×														
409	Application Specialist	Methodology	Design		-Database	•Selection of Database, and Understanding of Functions and Restrictions																						×	×														

No	Job Category	Skill Category	Skill Item		Knowledge Item		Specialty Field																																			
							Marketing			Sales		Consultant	IT Architect		Project Management			IT Specialist					Application Specialist		Software Development		Customer Service		IT Service Management			Education										
			Common Skill Item	Specialty Field Specific Skill Item	Knowledge Item (Middle Item)	Knowledge Item (Minor Item)	Marketing Management	Sales Channel Strategy	Market Communication	Consulting Sales by Visiting Customers	Product Sales by Visiting Customers	Sales via Media	Industry	Business Function	Application Architecture	Integration Architecture	Infrastructure Architecture	Systems Development	IT Outsourcing	Network Service	Software Product Development	Platform	Network	Database	Common Application Infrastructure	Systems Management	Security	Business Application System	Business Application Package	Operating System	Middleware	Application Software	Hardware	Software	Facility Management	Operations Management	System Operation	Operation	Service Desk	Training Planning	Instructions	
410	Application Specialist	Methodology	Design		-Middleware	•Selection of Middleware, and Understanding of Functions and Restrictions																					x	x														
411	Application Specialist	Methodology	Design		-Distributed Computing Design	•Design of Distributed Computing, and Understanding of Functions and Restrictions																					x	x														
412	Application Specialist	Methodology	Design		-Industrial Package Design	•Optimal Industrial Package Selection •Understanding of Industrial Package Functions and Restrictions •Practice of Application Design Utilizing Industrial Packages																					x	x														
413	Application Specialist	Methodology	Design		-Understanding and Utilization of Modeling Techniques	•Utilization and Practice of Data Modeling Techniques •Utilization and Practice of Process Modeling Techniques •Utilization and Practice of Performance Modeling Techniques •Utilization and Practice of Prototyping Techniques •Utilization and Practice of Benchmarking Techniques																					x	x														
414	Application Specialist	Methodology	Software Engineering		-Design Methods	•Object-Oriented Design •Structural Design •Data Oriented Design																					x	x														
415	Application Specialist	Methodology	Software Engineering		-Development Methods	•Development Methods Selection •Utilization and Practice of Development Techniques •Waterfall Model, RAD (Rapid Application Development) Model, Spiral Model •Application Package Specific Development Techniques																					x	x														
416	Application Specialist	Methodology	Software Engineering		-Utilization of Development Support Tools	•Development Environment •Various Application Development Tools •Management Tools •Debugger, Simulator, etc.																					x	x														
417	Application Specialist	Methodology	Software Engineering		-Programming Techniques	•Various Programming Languages Techniques, •Utilization and Practice of Notation																					x	x														
418	Application Specialist	Methodology	Software Engineering		-Programming Languages	•Characteristics of Various Languages such as C, C++, COBOL, Basic •Development in Graphical Development Environment																					x	x														
419	Application Specialist	Methodology	Software Engineering		-Testing Techniques	•Test Case Design •Specification Determination •Test Environment Set-up •Management •Test Data Preparation •Test Tool Utilization																					x	x														
420	Application Specialist	Methodology	Software Engineering		-Reuse Methods	•Utilization of Software Components •Deliverables Utilization of Advanced Project •Utilization and Practice of Reuse Methods •Architectural Pattern •Design Pattern •Framework, etc.																					x	x														
421	Application Specialist	Methodology	Software Engineering		-Security and Privacy	•Security Measures (Secret Preservation, Measures for Prevention of Falsification, Intrusion Prevention, Computer Virus, Integrity Measures, Availability Measures, Safety Measures, Social Engineering) •Privacy Protection •Risk Management •Guidelines and Relevant Regulations																					x	x														
422	Application Specialist	Methodology	Software Engineering		-Implementation and Inspection of Security Systems	•Selection and Installation of Security Products and Tools •Security System Development •Security Technology Implementation																					x	x														
423	Application Specialist	Methodology	Software Engineering		-External Design	•External Design Procedure •System Function Design •Data Model Design •Creation of External Specification																					x	x														

№	Job Category	Skill Category	Skill Item		Knowledge Item		Specialty Field																																				
							Marketing			Sales		Consultant	IT Architect		Project Management			IT Specialist					Application Specialist		Software Development		Customer Service		IT Service Management			Education											
			Common Skill Item	Specialty Field Specific Skill Item	Knowledge Item (Middle Item)	Knowledge Item (Minor Item)	Marketing Management	Sales Channel Strategy	Market Communication	Consulting Sales by Visiting Customers	Product Sales by Visiting Customers	Sales via Media	Industry	Business Function	Application Architecture	Integration Architecture	Infrastructure Architecture	Systems Development	IT Outsourcing	Network Service	Software Product Development	Platform	Network	Database	Common Application Infrastructure	Systems Management	Security	Business Application System	Business Application Package	Operating System	Middleware	Application Software	Hardware	Software	Facility Management	Operations Management	System Operation	Operation	Service Desk	Training Planning	Instructions		
424	Application Specialist	Methodology	Software Engineering		-Internal Design	•Function Design •Interface Design •Internal Data Design •Identification and Role-definition of Subcomponents •Relationship Definition among Subcomponents •Creation of Internal Specification																					x	x															
425	Application Specialist	Methodology	Software Engineering		-Object-Oriented Development	•Object-Oriented Basic Concept •UML •Object-Oriented Development Process •Analysis, Design, Implementation •Main Object-Oriented Techniques																						x	x														
426	Application Specialist	Methodology	Software Engineering		-Program Design	•Development Techniques and Platform Selection •Program Design Criteria •Creation of Program Specification •Creation of Test Plan and Specification																						x	x														
427	Application Specialist	Methodology	Software Engineering		-Utilization of Verification Methods	•Walk Through and Inspection																						x	x														
428	Application Specialist	Methodology	Software Engineering		-Standardization	•Standardization of Process for Development and Deals •Standardization of Information System Infrastructure •Data Standardization •Design and Management of Standard Organizations																						x	x														
429	Application Specialist	Methodology	Software Engineering		-System Audit	•System Audit Fundamentals •System Audit Planning •System Audit Implementation and Report																						x	x														
430	Application Specialist	Methodology	Software Engineering		-Technology Verification Methods	•Prototyping •Simulation •Modeling																						x	x														
431	Application Specialist	Methodology	Utilization of Consulting Techniques		-Selection and Utilization of Consulting Techniques	•Comparison, Analysis, Selection and Application of Consulting Techniques •Definition and Practice of Process •Deliverables Definition																						x	x														
432	Application Specialist	Methodology	Utilization of Consulting Techniques		-Understanding and Utilization of Analysis Tools and Models	•Business Life Cycle (Introduction Stage, Growth Stage, Maturity Stage, Decline Stage) Models •Product Portfolio Management (PPM) Models •Experience Curve •3C Analysis •SWOT Analysis •7S Models •Michael Porter's Five Forces Model •Value Chain Analysis																						x	x														
433	Application Specialist	Methodology	Knowledge Management and Utilization		-Management and Utilization of Knowledge	•Databases Creation of Knowledge (Added Value, Structuring, Sharing) •Knowledge Utilization •Maintenance and Management of Knowledge •Understanding Effects, and Improvement •Business Model Patents																						x	x														
434	Application Specialist	Business/ Industry		Development of Business Systems	-Business Environment	•Understanding and Utilization of Industry Specific Business Environments •Understanding and Utilization of Social Environments •Understanding and Utilization of Industry Specific Relevant Regulations •Understanding and Utilization of Industry Specific Regulatory Status •Understanding and Utilization of Convention																						x															
435	Application Specialist	Business/ Industry		Development of Business Systems	-Business Content	•Understanding and Utilization for Content and Characteristics of Business, •Understanding and Utilization of Industry Specific Standard Technology																						x															

No	Job Category	Skill Category	Skill Item		Knowledge Item		Specialty Field																														
							Marketing			Sales		Consultant		IT Architect		Project Management			IT Specialist					Application Specialist		Software Development		Customer Service		IT Service Management			Education				
			Marketing Management	Sales Channel Strategy	Market Communication	Consulting Sales by Visiting Customers	Product Sales by Visiting Customers	Sales via Media	Industry	Business Function	Application Architecture	Integration Architecture	Infrastructure Architecture	Systems Development	IT Outsourcing	Network Service	Software Product Development	Platform	Network	Database	Common Application Infrastructure	Systems Management	Security	Business Application System	Business Application Package	Operating System	Middleware	Application Software	Hardware	Software	Facility Management	System Operation	Operations Management	Service Desk	Training Planning	Instructions	
436	Application Specialist	Business/ Industry		Development of Business Systems	-Latest Business Trends	•Understanding and Utilization of Industry Specific Latest Trends •Understanding and Utilization of Industry Specific System Installation Cases																	x														
437	Application Specialist	Business/ Industry		Development of Business Systems	-Business Application Design	•Understanding and Utilization of Industry Specific Relevant Technology Information •Selection of Industry Specific Optimal Platform •Practice of Industry Specific Application Design																	x														
438	Application Specialist	Business/ Industry		Implementation of Application Package	-Latest Trends of Application Package	•Understanding of Latest Trends on Business Application Package Technology •Understanding and Utilization of Status for Competing Products •Understanding and Utilization of Installation Cases																	x														
439	Application Specialist	Business/ Industry		Implementation of Application Package	-Implementation Design of Application Package	•Selection of Optimal Business Application •Understanding of Business Package Function and Restrictions •Design of Business Application Package Implementation Scope •Practice of Business Application Package Implementation Determination •Practice of Man-hour Estimation for Customized Business Application Package •Practice of Application Design Utilizing Business Application Package																	x														
440	Application Specialist	Business/ Industry		Implementation of Application Package	-Selection of Runtime Environment for Application Package	•Practice of Optimal Platform and Vendor Selection																	x														
441	Application Specialist	Business/ Industry		Implementation of Application Package	-Installation of Application Package	•Environment Setting																	x														
442	Application Specialist	Business/ Industry		Implementation of Application Package	-Performance Tuning of Application Package	•Utilization and Practice of Performance Tuning Methods (Trace, Debugging, Problem Identification, Problem Solving, Route Optimization Method, etc.)																	x														
443	Application Specialist	Business/ Industry		Implementation of Application Package	-Development Method of Application Package Implementation	•Utilization and Practice of Development Method for Business Application Package Implementation																	x														
444	Software Development	Methodology	Software Engineering		-Web Application Technologies	•HTML •Servlet •EJB, J2EE •JSP, JSF •Various Markup Languages based on XML and XML •Web Services (SOA, SOAP, WSDL, UDDI, WS-Security, etc.)																			x		x										
445	Software Development	Methodology	Software Engineering		-Program Design	•Selection of Development Methods and Platform •Program Design Criteria •Program Specification Creation •Creation of Test Plan and Specification																			x		x		x								
446	Software Development	Methodology	Software Engineering		-Design Methods	•Object-Oriented Design •Structural Design •Data Oriented Design																			x		x		x								
447	Software Development	Methodology	Software Engineering		-Development Methods	•Development Methods Selection •Utilization and Practice of Development Technique •Waterfall Model, RAD (Rapid Application Development) Model, Spiral Model •Application Package Specific Development Techniques																			x		x		x								

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							Marketing			Sales	Consultant	IT Architect		Project Management			IT Specialist					Application Specialist		Software Development		Customer Service		IT Service Management			Education													
			Common Skill Item	Specialty Field Specific Skill Item	Knowledge Item (Middle Item)	Knowledge Item (Minor Item)	Marketing Management	Sales Channel Strategy	Market Communication	Consulting Sales by Visiting Customers	Product Sales by Visiting Customers	Sales via Media	Industry	Business Function	Application Architecture	Integration Architecture	Infrastructure Architecture	Systems Development	IT Outsourcing	Network Service	Software Product Development	Platform	Network	Database	Common Application Infrastructure	Systems Management	Security	Business Application System	Business Application Package	Operating System	Middleware	Application Software	Hardware	Software	Facility Management	Operations Management	System Operation	Operation	Service Desk	Training Planning	Instructions			
448	Software Development	Methodology	Software Engineering		-Utilization of Development Support Tools	•Development Environment •Various Application Development Tools •Configuration Management Tools •Debugger, Simulator, etc.																								x	x	x												
449	Software Development	Methodology	Software Engineering		-Program Implementation	•Coding •Understanding and Practice of Test Process, Procedure and Methods																									x	x	x											
450	Software Development	Methodology	Software Engineering		-Programming Techniques	•Utilization and Practice of Various Programming Language Techniques and Notation																									x	x	x											
451	Software Development	Methodology	Software Engineering		-Testing Techniques	•Test Case Design •Specification Determination •Test Environment Set-up •Management •Test Data Preparation •Test Tool Utilization																									x	x	x											
452	Software Development	Methodology	Software Engineering		-Reuse Methods	•Utilization of Software Components •Deliverables Utilization of Advanced Project •Utilization and Practice of Reuse Methods •Architectural Pattern •Design Pattern •Framework, etc.																										x	x	x										
453	Software Development	Methodology	Software Engineering		-Implementation and Inspection of Security Systems	•Selection and Installation of Security Products and Tools •Security System Development •Security Technology Implementation																										x	x	x										
454	Software Development	Methodology	Software Engineering		-External Design	•System Function Design •Data Model Design •Creation of External Specification																										x	x	x										
455	Software Development	Methodology	Software Engineering		-Internal Design	•Function Design •Interface Design •Internal Data Design •Identification and Role-definition of Subcomponents •Relationship definition among Subcomponents •Creation of Internal Specification																										x	x	x										
456	Software Development	Methodology	Software Engineering		-Object-Oriented Development	•Object-Oriented Basic Concept •UML •Object-Oriented Development Process •Analysis, Design and Implementation •Main Object-Oriented Techniques																										x	x	x										
457	Software Development	Methodology	Software Engineering		-Debugging Methods	•Utilization and Practice of Debugging Tools																										x	x	x										
458	Software Development	Methodology	Software Engineering		-Utilization and Practice of Technology Verification Methods	•Prototyping •Simulation •Modeling																										x	x	x										
459	Software Development	Methodology	Software Engineering		-Security and Privacy	•Security Measures (Secret Preservation, Measures for Prevention of Falsification, Intrusion Prevention, Computer Virus, Integrity Measures, Availability Measures, Safety Measures, Social Angering) •Privacy Protection •Risk Management •Guidelines and Relevant Regulations																										x	x	x										
460	Software Development	Methodology	Software Engineering		-Information Development	•Design and Development of Product Information																										x	x	x										
461	Software Development	Methodology	Software Engineering		-Technological Problem Solving Methods	•Utilization and Practice of Technological Problem Solving Method																										x	x	x										
462	Software Development	Methodology	Software Engineering		-System Audit	•System Audit Fundamentals •System Audit Planning •Understanding and Utilization of System Audit Implementation and Report																										x	x	x										

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							Marketing			Sales		Consultant		IT Architect		Project Management		IT Specialist					Application Specialist		Software Development		Customer Service		IT Service Management			Education					
			Marketing Management	Sales Channel Strategy	Market Communication	Consulting Sales by Visiting Customers	Product Sales by Visiting Customers	Sales via Media	Industry	Business Function	Application Architecture	Integration Architecture	Infrastructure Architecture	Systems Development	IT Outsourcing	Network Service	Software Product Development	Platform	Network	Database	Common Application Infrastructure	Systems Management	Security	Business Application System	Business Application Package	Operating System	Middleware	Application Software	Hardware	Software	Facility Management	Operations Management	System Operation	Operation	Service Desk	Training Planning	Instructions
463	Software Development	Methodology	Software Engineering		-Standardization	•Standardization of Process for Development and Deals •Standardization of Information System Infrastructure •Data Standardization •Design and Management of Standard Organizations																			x	x	x										
464	Software Development	Technology	Technology		-Latest Technology Trends	•Understanding of Latest Hardware Technology Trends •Understanding of Latest Middleware Technology Trends •Understanding of Latest Platform Technology Trends •Understanding of Latest Network Technology Trends •Understanding of Latest Database Technology Trends •Understanding of Latest Security Technology Trends •Understanding of Latest System Management Technology Trends																			x	x	x										
465	Software Development	Technology	Technology		-Internet Application Fundamental Technology	•Basic Structure of Application Server System •Basic Requirements of Application Server System (Throughput, Aggression resistance, Fault-Tolerant Operation, Expandability, etc.)																		x	x	x											
466	Software Development	Technology	Technology		-Database Design	•Database Logical Design •Database Physical Design																			x	x	x										
467	Software Development	Technology	Technology		-Computer Science Fundamentals	•Fundamental Theory of Information •Data Structure and Algorithm																		x	x	x											
468	Software Development	Technology	Technology		-Computer System	•Hardware •Operating system •System Configuration and Method •System Application																		x	x	x											
469	Software Development	Technology	Technology		-System Development Environment	•System Development Method •Understanding and Utilization of Languages, Tools and Software Packages																		x	x	x											
470	Software Development	Technology	Technology		-Database Technologies	•Database Models •Database Languages •Database Control																		x	x	x											
471	Software Development	Technology	Technology		-Basic Function of Relational Database Management Systems	•Basic Structure of Relational Database Systems •Retention Function of System Catalogues •Fetch and Execute Function of Relational Tables •Interpretative Function of Database Utilization Demand •Record Function of Database Utilization •Database Backup and Recovery Function •Integrity Assurance Function																	x	x	x												
472	Software Development	Technology	Technology		-Data Modeling	•Utilization and Practice of Data Modeling Techniques •Selection and Utilization of Data Modeling Tools																		x	x	x											
473	Software Development	Technology	Technology		-Design of Database Operations	•Performance Design, Failure Measure																		x	x	x											
474	Software Development	Technology	Technology		-Platform Technology	•Hardware Architecture, Storage Management, Communication Control, Transaction Processing, Distributed Processing, Parallel Processing																	x	x	x												
475	Software Development	Technology	Technology		-System Platform Technology	•Utilization and Practice of Operating System Technology (Mainframe, Disperser(Office Computer), Unix, Windows, Linux, etc)																		x	x	x											
476	Software Development	Technology	Technology		-Understanding and Utilization of Network Technology	•Protocol and Transmission Control •Encoding and Transmission •Network Related Regulations •Network Security •Communication Equipment •Internet •Network Software •Line-related Technology (ATM, Frame Relay, LAN, WAN, etc) •TCP/IP																		x	x	x											

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							Marketing			Sales		Consultant		IT Architect		Project Management			IT Specialist					Application Specialist		Software Development		Customer Service		IT Service Management			Education									
			Common Skill Item	Specialty Field Specific Skill Item	Knowledge Item (Middle Item)	Knowledge Item (Minor Item)	Marketing Management	Sales Channel Strategy	Market Communication	Consulting Sales by Visiting Customers	Product Sales by Visiting Customers	Sales via Media	Industry	Business Function	Application Architecture	Integration Architecture	Infrastructure Architecture	Systems Development	IT Outsourcing	Network Service	Software Product Development	Platform	Network	Database	Common Application Infrastructure	Systems Management	Security	Business Application System	Business Application Package	Operating System	Middleware	Application Software	Hardware	Software	Facility Management	Operations Management	System Operation	Operation	Service Desk	Training Planning	Instructions	
477	Software Development	Technology	Technology		-Internet Technology	•Internet History •Web Related Technologies •Technologies relating to mails •Cryptographic Technology •Digital Media Related Technology (VoIP, Streaming, QoS, etc)																							x	x	x											
478	Software Development	Technology	Technology		-Programming Languages /Markup Languages	•Various Languages such as C, C++, COBOL, Java, UML, HTML, XML •Characteristics of Notation •Usage of Graphical Development Environment																								x	x	x										
479	Software Development	Technology	Technology		-Parallel Processing Programming Techniques																									x	x	x										
480	Software Development	Technology	Technology		-Middleware Technique	•Understanding and Utilization for Structure of Web and CGI, JSP and EJB																								x	x	x										
481	Software Development	Technology	Technology		-Inter-Component Communication	•IIOP •CORBA •Socket, etc.																								x	x	x										
482	Software Development	Technology	Technology		-Application Security	•Design, Development and Installation of Application Security Functions																								x	x	x										
483	Software Development	Technology	Technology		-Relationship of Synchronization Points between Transaction Processes and Databases																									x	x	x										
484	Software Development	Technology	Technology		-Understanding and Utilization of Computer System Architecture and Fundamental Technologies																									x	x	x										
485	Software Development	Methodology	Design		-Design Methods	•Object-Oriented Design •Structural Design •Data Oriented Design																								x	x	x										
486	Software Development	Methodology	Design		-Understanding and Utilization of Modeling Techniques	•Utilization and Practice of Data Modeling Techniques •Utilization and Practice of Process Modeling Techniques •Utilization and Practice of Performance Modeling Techniques •Utilization and Practice of Prototyping Techniques •Utilization and Practice of Benchmarking Techniques																								x	x	x										
487	Software Development	Methodology	Design		-Architecture Process	•Abstraction of Market Demand •Possible Applications of Advanced Technology •Possibility of Architecture (Versatility, Expandability) •Effectiveness of Technology Prototyping																								x	x	x										
488	Software Development	Methodology	Design		-Understanding of Database, Middleware, and Distributed Computing Design	•Selection of Optimal Database, Middleware, and Distributed Computing •Understanding for Function and Restrictions of Database, Middleware, and Distributed Computing •Practice of Application Design utilizing Database, Middleware, and Distributed Computing																								x	x	x										
489	Software Development	Methodology	Design		-Design of Development Environment	•Definition of Development Environment Requirements •Platform Selection																								x	x	x										
490	Software Development	Methodology	Design		-Requirements Definition	•User Demand •Project Scope •Clarification of Objectives •Project Prioritization and Coordination among Related Departments •Implementation of Requirement Survey •Definition of Requirement •Documentation •Survey of Resource Demand •Creation of Systemization Plan																								x	x	x										

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							Marketing			Sales		Consultant		IT Architect		Project Management			IT Specialist					Application Specialist		Software Development		Customer Service		IT Service Management			Education									
			Common Skill Item	Specialty Field Specific Skill Item	Knowledge Item (Middle Item)	Knowledge Item (Minor Item)	Marketing Management	Sales Channel Strategy	Market Communication	Consulting Sales by Visiting Customers	Product Sales by Visiting Customers	Sales via Media	Industry	Business Function	Application Architecture	Integration Architecture	Infrastructure Architecture	Systems Development	IT Outsourcing	Network Service	Software Product Development	Platform	Network	Database	Common Application Infrastructure	Systems Management	Security	Business Application System	Business Application Package	Operating System	Middleware	Application Software	Hardware	Software	Facility Management	Operations Management	System Operation	Operation	Service Desk	Training Planning	Instructions	
491	Software Development	Methodology	Design		-Estimation and Schedule Methods	•Scale Estimation (LOC/ Function Point/ COCOMO, etc.) •Schedule Optimization (Critical Path, PERT, Gantt Chart, etc.)																							x	x	x											
492	Software Development	Methodology	Development Methods Design		-Selection of Adaptive Standards	•International Standards •Industrial standards •De Facto Standards •In-House Standards																								x	x	x										
493	Software Development	Methodology	Development Methods Design		-Fundamentals of Risk Management	•Formulation of Risk Management Plan •Risk Identification •Qualitative Risk Analysis •Quantitative Risk Analysis •Formulation of Risk Response Plan •Risk Monitoring and Management																								x	x	x										
494	Software Development	Methodology	Development Methods Design		-Software Development Process	•Positioning in Business Process •Development Plan Creation (Subprocess, Measurement, Personnel Assignment, Tools, Deliverables, etc.) •Specifications and Models relating to Software Development																								x	x	x										
495	Software Development	Methodology	Development Methods Design		-Quality Inspection (Software Development)	•Design Review •Code Review •Function Test •Integration Test •Performance Test •Durability Test •Usability Test																								x	x	x										
496	Software Development	Methodology	Development Methods Design		-Creation of Test Implementation Plan																									x	x	x										
497	Software Development	Methodology	Analysis and Requirements Definition		-Understanding of Market Trends and Competitive Trends	•Information Collection •Information Analysis •Understanding of Market Trends and Competitive Trends																								x	x	x										
498	Software Development	Methodology	Analysis and Requirements Definition		-Formulation of Software Product Strategy	•Customer Segment Analysis •Demand Analysis •SWOT Analysis •Formulation of Software Product Strategy •Understanding of Own Company Strategy																								x	x	x										
499	Software Development	Methodology	Analysis and Requirements Definition		-Formulation of Project and Plan	•Understanding of Customer Required Specifications •Formulation of Software Product Planning •Proposal of Software Product Planning •Formulation of Software Product Development Plan •Understanding for Investment and Loss/Profit Model in Software Product																								x	x	x										
500	Software Development	Methodology	Analysis and Requirements Definition		-Management of Business Issues	•Issue Discovery •Review of Solutions •Problem Solving																								x	x	x										
501	Software Development	Methodology	Analysis and Requirements Definition		-Globalization	•Response to Region- and Country-Specific Relevant Laws, Regulations and Specifications •Multi Language Support •Standards and Architecture such as Unicode, POSIX -defined Globalization Model, CDRA (Character Data Representation Architecture)																								x	x	x										
502	Software Development	Methodology	Analysis and Requirements Definition		-Intellectual Property Right																									x	x	x										
503	Software Development	Methodology	Analysis and Requirements Definition		-Industry and Technology Trends	•International Standards, Industrial Standards •High-Technology •Remarkable Technology																								x	x	x										
504	Software Development	Methodology	Analysis and Requirements Definition		-Human-centered Design																									x	x	x										
505	Software Development	Methodology	Analysis and Requirements Definition		-Accessibility (Software Development)	•Accessibility Function of Various Systems •Country Specific Guidelines and Regulations																								x	x	x										
506	Software Development	Methodology	Analysis and Requirements Definition		-Knowledge of Relevant Laws and Regulations	•Understanding and Compliance of Relevant Regulations																								x	x	x										

No	Job Category	Skill Category	Skill Item		Knowledge Item		Specialty Field																																								
							Marketing			Sales	Consultant	IT Architect		Project Management		IT Specialist					Application Specialist		Software Development		Customer Service		IT Service Management			Education																	
			Common Skill Item	Specialty Field Specific Skill Item	Knowledge Item (Middle Item)	Knowledge Item (Minor Item)	Marketing Management	Sales Channel Strategy	Market Communication	Consulting Sales by Visiting Customers	Product Sales by Visiting Customers	Sales via Media	Industry	Business Function	Application Architecture	Integration Architecture	Infrastructure Architecture	Systems Development	IT Outsourcing	Network Service	Software Product Development	Platform	Network	Database	Common Application Infrastructure	Systems Management	Security	Business Application System	Business Application Package	Operating System	Middleware	Application Software	Hardware	Software	Facility Management	Operations Management	System Operation	Operation	Service Desk	Training Planning	Instructions						
507	Software Development	Methodology		Hardware Compatibility Design	-Understanding for Architecture of Applied Hardware																								x																		
508	Software Development	Methodology		Platform-Independent Design	-Understanding and Utilization for Architecture of Application Hardware, Related Operating System, and Related Middleware																									x																	
509	Software Development	Methodology		Business Application Design	-Understanding and Utilization of Application Software Knowledge																										x																
510	Customer Service	Methodology	System Maintenance Management		-Remote Maintenance	•Utilization and Practice of Remote Maintenance Technique, Tools and Process																												x	x	x											
511	Customer Service	Methodology	System Maintenance Management		-Social Engineering	•Leakage Countermeasures for Confidential Information (Measurement for Phone Impersonation, Password Theft, Trashing, etc)																													x	x	x										
512	Customer Service	Technology	Technology		-Latest Trends of IT Market Trends	•Understanding and Utilization of IT Market Scales and Trends Domestic and Abroad •Understanding and Utilization of Application Related Technology Trends •Understanding and Utilization of Technology Trends relating to Business Model Patent •Understanding and Utilization of Next Generation E-Business and its Development																														x	x	x									
513	Customer Service	Technology	Technology		-Latest Technology Trends	•Understanding of Latest Hardware Technology Trends •Understanding of Latest Middleware Technology Trends •Understanding of Latest Platform Technology Trends •Understanding of Latest Network Technology Trends •Understanding of Latest Database Technology Trends •Understanding of Latest Security Technology Trends •Understanding of Latest System Management Technology Trends																															x	x	x								
514	Customer Service	Technology	Technology		-Internet Technologies	•Internet History •Web Related Technologies •Technologies relating to Mails •Cryptographic Technology •Digital Media Related Technology (VoIP, Streaming, QoS, etc)																																x	x	x							
515	Customer Service	Technology	Technology		-Computer Systems	•Hardware •Operating System •System Structure and Architecture •System Application																																x	x	x							
516	Customer Service	Technology	Technology		-Computer Science Fundamentals	•Basic Theory of Information •Data Structures and Algorithms																																x	x	x							
517	Customer Service	Technology	Technology		-System Development Environment	•System Development Method •Understanding and Utilization of Languages, Tools and Software Packages																																x	x	x							
518	Customer Service	Technology	Technology		-System Platform Technology	•Utilization and Practice of Operating System Technology (Mainframe, Disperser(Office Computer), UNIX, Windows, Linux, etc)																																x	x	x							

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							Marketing			Sales		Consultant	IT Architect		Project Management		IT Specialist					Application Specialist		Software Development		Customer Service		IT Service Management			Education														
			Common Skill Item	Specialty Field Specific Skill Item	Knowledge Item (Middle Item)	Knowledge Item (Minor Item)	Marketing Management	Sales Channel Strategy	Market Communication	Consulting Sales by Visiting Customers	Product Sales by Visiting Customers	Sales via Media	Industry	Business Function	Application Architecture	Integration Architecture	Infrastructure Architecture	Systems Development	IT Outsourcing	Network Service	Software Product Development	Platform	Network	Database	Common Application Infrastructure	Systems Management	Security	Business Application System	Business Application Package	Operating System	Middleware	Application Software	Hardware	Software	Facility Management	Operations Management	System Operation	Operation	Service Desk	Training Planning	Instructions				
519	Customer Service	Technology	Technology		-Security and Privacy	•Security Measures (Secret Preservation, Measures for Prevention of Falsification, Intrusion Prevention, Computer Virus, Integrity Measures, Availability Measures, Safety Measures, Social Engineering) •Privacy Protection •Risk Management •Guidelines and Relevant Regulations																										x	x	x											
520	Customer Service	Technology	Technology		-Database Technologies	•Database Models •Database Languages •Database Control																											x	x	x										
521	Customer Service	Technology	Technology		-Understanding and Utilization of Network Technologies	•Protocol and Transmission Control •Encoding and Transmission •Network Related Regulations •Network Security •Communication Equipment •Internet •Network Software •Line-related Technology (ATM, Frame Relay, LAN, WAN, etc) •TCP/IP																											x	x	x										
522	Customer Service	Technology	Technology		-Platform Technologies	•Hardware Architecture •Storage Management •Operating System •Communication Control, •Transaction Processing, •Distributed Processing, •Parallel Processing																												x	x	x									
523	Customer Service	Technology	Technology		-Programming Languages/Markup Languages	•Various Languages such as C, C++, COBOL, Java, UML, HTML, XML •Characteristics of Notation •Usage of Graphical Development Environment																												x	x	x									
524	Customer Service	Technology		Hardware Technology	-IT Architecture (Hardware)	•Understanding of Hardware Architecture •Understanding of Hardware Platform •Understanding of Hardware Configuration •Understanding and Utilization for Reliability, Availability and Serviceability of Hardware System																												x											
525	Customer Service	Technology		Hardware Technology	-Hardware Basic Technology	•Utilization of Basic Knowledge for Electricity, Electron, Machine, and Optical Engineering																												x											
526	Customer Service	Technology		Hardware Technology	-Installation of Hardware Products	•Understanding and Practice of Installation Planning Techniques •Utilization and Practice of Installation Process •Understanding and Utilization of Specifications and Installation Manuals •Practice of Hardware Products Installation •Practice of Procedure for Installation Completion and Report •Design and Installation of Mutual Backup System with Remote Center •Design and Installation of Critical Data Integrity System •Design and Installation of Mission Critical System																													x										
527	Customer Service	Technology		Hardware Technology	-Maintenance of Hardware Products	•Maintenance Planning •Utilization and Practice of Maintenance Process •Understanding and Utilization of Maintenance Manual •Practice of Hardware Products Maintenance •Utilization of Measuring Instruments and Test Tools •Practice of Procedure for Maintenance Completion and Report •Preventive Maintenance																													x										
528	Customer Service	Technology		Hardware Technology	-Network Maintenance	•Analysis of Error Code •Log Analysis •Memory Dump Analysis •Understanding and Utilization of Trace Tools •Problem Determination and Troubleshooting																													x										

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529	Customer Service	Technology		Hardware Technology	-Hardware related International Standards and Relevant Regulations	•Quality Control •International Standards for Assessment of Equipment and System Security Function •Hardware Interface Specification •Relevant JIS Specification																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		

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537	Customer Service	Technology		Software Technology	-Security Technology Trends	•Understanding and Utilization of Single Sign-on Techniques Trend •Understanding and Utilization of PKI Techniques Trend •Understanding and Utilization of Security Administration Techniques Trend •Understanding and Utilization of Intrusion Prevention Techniques Trend •Understanding and Utilization of Encryption Techniques •Understanding and Utilization of Electronic Signature Techniques •Understanding and Utilization of Firewall Techniques																																				
538	Customer Service	Technology		Software Technology	-Software-Related International Standards and Relevant Standards	•Quality Control •Quality Characteristics of Software Products •International Standards of Software Life Cycle Process •OSI Layer Standards •Relevant JIS Standards																																				
539	Customer Service	Technology		Software Technology	-Understanding and Utilization of Network Technology	•Protocol and Transmission Control •Encoding and Transmission •Network Related Regulations •Network Security •Internet •Communication Equipment •Line-related Technology (ATM, Frame Relay, LAN, WAN, etc)																																				
540	Customer Service	Technology		Facility Management	-Latest Trends of Facility and Network Product Technology	•Understanding and Utilization of Latest Facility and Network Product Technology Trends																																				
541	Customer Service	Technology		Facility Management	-Design, Facilities, Maintenance, and Operation of Physical Network (Communications Network)	•Fundamentals of Communication Technology (Transmission Media, Transmission Techniques, Distribution Methods, Communication) •Understanding and Utilization of Fundamentals and Standards for Telecommunications Facilities (Network) Plan, Design and Construction •Design, Construction, Maintenance and Operation of Communication Network Backup Systems for Disaster Recovery																																				
542	Customer Service	Technology		Facility Management	-Practice of Safety Management for Construction of Physical Network (Communications Network) Facilities (Equipment)	•Confirmation of Earthing Cable Wires •Confirmation of Earthing Equipment •Confirmation of Separation between Original Power Source and Secondary Source																																				
543	Customer Service	Technology		Facility Management	-Design, Construction, Maintenance, and Operation of Data Center Facilities	•Fundamentals of Building Design and Construction •Plan, Design and Construction of Electrical Equipment •Fundamentals for Plan, Design and Construction of Air-Conditioning Facilities •Formulation for Installation Plan of Environment Facilities •Formulation of Environmental Facilities Design and Installation Requirement •Design, Construction and Management of Environmental Facilities, and Utilization and Practice of Maintenance and Operation Tools •Failure Measurement •Installation and Management for Earthquake-proof or Aseismatic Device of IT Equipment																																				
544	Customer Service	Technology		Facility Management	-Installation, Moving, Upgrade, and Migration of Computer System	•Construction and Management of Computer System																																				

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							Marketing			Sales		Consultant		IT Architect			Project Management			IT Specialist					Application Specialist		Software Development		Customer Service		IT Service Management			Education											
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545	Customer Service	Technology		Facility Management	-Design, Construction, Maintenance, and Operation of Disaster and Crime Prevention Facilities •Design, Construction Management of Disaster and Crime Prevention Facilities •Maintenance and Operation of Disaster and Crime Prevention Facilities •Utilization and Practice of Tools for Design, Construction, Maintenance and Operation •Utilization and Practice for Design and Construction Management Techniques of Disaster Control Facilities •Fundamentals for Disaster Control of Facilities, and Fundamentals for Plan, Design and Construction of Fire Fighting Facilities •Risk Management of Disaster and Crime Prevention Security •Plan, Design and Construction of Security Equipment	•Formulation for Installation Plan of Disaster and Crime Prevention Facilities •Requirement Formulation for Design and Installation of Disaster and Crime Prevention Facilities •Design and Construction Management of Disaster and Crime Prevention Facilities •Maintenance and Operation of Disaster and Crime Prevention Facilities •Utilization and Practice of Tools for Design, Construction, Maintenance and Operation •Utilization and Practice for Design and Construction Management Techniques of Disaster Control Facilities •Fundamentals for Disaster Control of Facilities, and Fundamentals for Plan, Design and Construction of Fire Fighting Facilities •Risk Management of Disaster and Crime Prevention Security •Plan, Design and Construction of Security Equipment																																							
546	Customer Service	Technology		Facility Management	-Environmental Measures •Design and Construction of Energy Conservation and Environmental Facilities (Equipment) •Understanding and Utilization of Environment related Regulations (Building Material Recycling Law, Law for Promotion of Effective Utilization of Resources, Waste Disposal and Public Cleaning Law, etc.) •Compliance with Environmental Quality Standards (Reduction and Recycle of Construction By-	•Design and Construction of Energy Conservation and Environmental Facilities (Equipment) •Understanding and Utilization of Environment related Regulations (Building Material Recycling Law, Law for Promotion of Effective Utilization of Resources, Waste Disposal and Public Cleaning Law, etc.) •Compliance with Environmental Quality Standards (Reduction and Recycle of Construction By-																																							
547	Customer Service	Technology		Facility Management	-Facilities (Equipment) - related accreditation Qualification •Acquisition of official Qualification in Specific Area such as Construction, Electricity, Machine, and Communication Network, etc.	•Acquisition of official Qualification in Specific Area such as Construction, Electricity, Machine, and Communication Network, etc.																																							
548	Customer Service	Technology		Facility Management	-Cost Accumulation •Implementation of Top-Down Cost Estimating •Implementation of Bottom-Up Cost Estimating •Utilization and Practice of Estimating Tools •Utilization and Practice of Cost Estimating Methodology	•Implementation of Top-Down Cost Estimating •Implementation of Bottom-Up Cost Estimating •Utilization and Practice of Estimating Tools •Utilization and Practice of Cost Estimating Methodology																																							
549	Customer Service	Technology		Facility Management	-Knowledge of Safety Management, such as Crime and Disaster Prevention Measures in Data Center •Construction Safety •Electrical Safety •Ensuring Safety and Health •Occupational Safety and Health related Laws •Plan and Implementation of Safety and Health Management System and Integrated Safety and Health Management	•Construction Safety •Electrical Safety •Ensuring Safety and Health •Occupational Safety and Health related Laws •Plan and Implementation of Safety and Health Management System and Integrated Safety and Health Management																																							
550	Customer Service	Technology		Facility Management	-Reliability, Availability, and Serviceability of Facilities •Fundamentals for Reliability, Availability and Serviceability of Facilities and Physical Network (Communication Network)	•Fundamentals for Reliability, Availability and Serviceability of Facilities and Physical Network (Communication Network)																																							
551	Customer Service	Technology		Facility Management	-Basic Knowledge of Facilities Management Related regulations and Standards •Basic Knowledge of Safety and Health Management •Basic Knowledge of Environment Related Laws	•Basic Knowledge of Safety and Health Management •Basic Knowledge of Environment Related Laws																																							
552	Customer Service	Technology		Facility Management	-Problem Solving Methods for Facilities Management Technology •Utilization and Practice of Various Space Design Methodology •Utilization and Practice of Knowledge for Building Intensity •Utilization and Practice of Knowledge for Piping Design •Knowledge and Utilization of for Electric Wiring	•Utilization and Practice of Various Space Design Methodology •Utilization and Practice of Knowledge for Building Intensity •Utilization and Practice of Knowledge for Piping Design •Knowledge and Utilization of for Electric Wiring																																							
553	Customer Service	Technology		Facility Management	-Fundamentals for Safety and Health Related Regulations •Laws relating to Handling, Storage and Treatment of Hazardous Materials •Building Safety and Health Management Laws •Occupational Safety and Health Laws	•Laws relating to Handling, Storage and Treatment of Hazardous Materials •Building Safety and Health Management Laws •Occupational Safety and Health Laws																																							

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554	Customer Service	Technology		Facility Management	-Basic Knowledge of Architecture and Architectural drawing (CAD)	•Basic Knowledge of Construction •Knowledge and Operation Techniques of Architectural Drawing, CAD																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		

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							Marketing			Sales		Consultant	IT Architect		Project Management		IT Specialist					Application Specialist		Software Development		Customer Service		IT Service Management			Education											
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567	IT Service Management	Methodology	Personnel Management		-Personnel Employment and Deployment	•Determination of Adoption Conditions •Recruiting •Assessment and Adoption																													x	x	x	x				
568	IT Service Management	Methodology	Personnel Management		-Skill Management	•Technical Knowledge •Work Experience •Performance •Knowledge of Specialty Fields																													x	x	x	x				
569	IT Service Management	Methodology	Personnel Management		-Mechanism Creation and Personnel Deployment	•Ability Assessment •Formulation of Personnel Structure •Human Communication																													x	x	x	x				
570	IT Service Management	Methodology	Personnel Management		-Human Resource Development	•Training Plan •OJT •OFFJT •Fostering Humanity																													x	x	x	x				
571	IT Service Management	Methodology	Personnel Management		-Mental Health	•Specific Stress •Counseling •Detection and Measures of Stress •Stress-related Disorder and Measures •Mental Care																													x	x	x	x				
572	IT Service Management	Methodology	Personnel Management		-Coaching	•Pre-Coaching •Goal Setting •Identification of Current Status •Gap Analysis •Behavior Decision •Follow-up and Looking Back																													x	x	x	x				
573	IT Service Management	Methodology	Information Assets Management		-Purchasing of Service and Equipment																															x	x	x	x			
574	IT Service Management	Methodology	Information Assets Management		-Cost Allocation																															x	x	x	x			
575	IT Service Management	Methodology	Information Assets Management		-Assets Management	•Creation of Assets Management Procedure •Inventory •Stock Management																														x	x	x	x			
576	IT Service Management	Technology	Technology		-Computer Science Fundamentals	•Basic Theory of Information •Data Structure and Algorithm																														x	x	x	x			
577	IT Service Management	Technology	Technology		-Computer System	•Hardware •Operating System •System Structure and Architecture •System Applications																														x	x	x	x			
578	IT Service Management	Technology	Technology		-Platform Techniques	•Hardware Architecture •Storage Management •Operating System •Communication Control •Transaction Processing •Distribution Processing •Parallel Processing																														x	x	x	x			
579	IT Service Management	Technology	Technology		-Database Technology	•Database Model •Database Languages •Database Control																															x	x	x	x		
580	IT Service Management	Technology	Technology		-Network Technology	•Protocol and Transmission Control •Encoding and Transmission •Network Related Regulations •Network Security •Communication Equipment •Internet •Network Software •Line-related Technology (ATM, Frame Relay, LAN, WAN, etc) •TCP/IP																															x	x	x	x		
581	IT Service Management	Technology	Technology		-Internet Technology	•Internet History •Web Related Technologies •Technologies relating to Mails •Cryptographic Technology •Digital Media Related Technology (VoIP, Streaming, QoS, etc)																															x	x	x	x		
582	IT Service Management	Technology	Technology		-System Development Technology	•System Development Method •Understanding and Utilization of Languages, Tools and Software Package																															x	x	x	x		

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583	IT Service Management	Technology	Technology		-Security and Privacy	•Secret Preservation •Measures for Prevention of Falsification •Intrusion Prevention •Computer Virus •Integrity Measures •Availability Measures •Safety Measures •Social Engineering •Privacy Protection •Risk Management •Guidelines and Relevant Regulations																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								</

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592	IT Service Management	Methodology		Service Delivery	-Service Level Management	•Business Knowledge •Service Level Items Setup •SLA Formulation •Service Level Monitoring and Assessment •Improvement of IT Service •Network Audit •System Audit																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				</

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							Marketing			Sales		Consultant	IT Architect		Project Management		IT Specialist					Application Specialist		Software Development		Customer Service		IT Service Management			Education										
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604	IT Service Management	Methodology		Facility Management	-Equipment Management	•Power Capacity •Power Outage Measurement •Floor Pressure Management •Racking Constitution •Cooling Facilities																												x							
605	IT Service Management	Technology		Business Administration of IT Service Management	-Work Flow Analysis of IT Service Management	•System Chart and Responsibility Sharing Chart •Work Flow Chart																												x							
606	IT Service Management	Technology		Business Administration of IT Service Management	-Installation and Setup of Operating Application Management System	•Installation and Customization of Various Information Transmission Tools for Operating Application Management (Workflow Tools, Web Server, Mail Server, CTI)																												x							
607	IT Service Management	Technology		Business Administration of IT Service Management	-Administration of Operating Application Management System	•Maintenance Management of Various Information Transmission Tools for Operating Application Management (Workflow Tools, Web Server, Mail Server, CTI)																												x							
608	IT Service Management	Technology		Application Management	-Driving Control	•Jobnet Design •Job Driving Control Tools																												x							
609	IT Service Management	Technology		Application Management	-Operating Methods during Failures	•Failure Detection (Including Failure Message System) •Release Failure Recovery Method •Emergency Release Method •Recovery Method •Degenerate Driving Method																												x							
610	IT Service Management	Technology		Application Management	-Performance Management	•Performance Monitoring Tools •Tuning Techniques																												x							
611	IT Service Management	Technology		Application Management	-Configuration Management	•Library Management Tools																												x							
612	IT Service Management	Technology		Application Management	-Acceptance of Application System	•Assessment of Test Plan/Results for Developing Quality •Assessment of Design and Test Results of Operating Methods during Failures •Assessment of Design and Test Results of Performance																												x							
613	IT Service Management	Technology		System Platform Management	-Platform Design Architecture as Common Infrastructure	•Requirement Definition (Performance and Availability, etc) •Architecture Design •Prerequisite Network Environment Setup •OS Installation •OS Environmental Parameter Setting •Middleware Installation •User Environment Setup																												x							
614	IT Service Management	Technology		System Platform Management	-Platform System Management	•Failure Monitoring Tools •Performance Monitoring Tools •Configuration Management Tools •Backup Management Tools •System Maintenance (Program Stop, Patch Work, Hardware Parts Exchange, Measurement of Maintenance Work Failure)																												x							
615	IT Service Management	Technology		System Platform Management	-Acceptance of System Platform	•Assessment of Test Plan/Results for Configuration Quality •Assessment of Design and Test Results of Operating Methods during Failures •Assessment of Design and Test Results for Performance																												x							
616	IT Service Management	Technology		Database Management	-Database Design Architect as Common Infrastructure	•Logical Data Model Creation •Physical Database Design •Installation and Migration																													x						
617	IT Service Management	Technology		Database Management	-Database System Management	•Backup and Recovery •Performance Monitoring and Tuning •Table Reload •Patch Work for DBMS •Log Suction																													x						

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618	IT Service Management	Technology		Database Management	-Acceptance of Database System	•Assessment of Test Plan/Results for Configuration Quality •Assessment of Design/Test Results for Backup/Recovery •Assessment of Design and Test Results of Operating Methods during Failures •Assessment of Design and Test Results for Performance																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											</

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632	IT Service Management	Technology		IT Service Operation	-System Monitoring	•Process Monitoring •Server and Client Monitoring •Service Monitoring •Network Monitoring																														x						
633	IT Service Management	Technology		IT Service Operation	-Runtime Environment Management	•Understanding of Normal Status •Understanding of Monitor Target Items •Recording Operating Status •Reporting Operating Status																														x						
634	IT Service Management	Technology		IT Service Operation	-Failure Management	•Response during Failure •Escalation •Contact with Relevant Departments •Failure Record																															x					
635	IT Service Management	Technology		IT Service Operation	-Forms Delivery	•Confidential Forms Handling •Massive Forms Handling																															x					
636	IT Service Management	Technology		IT Service Operation	-Media Management	•Media Storage •Media Conversion •Storage limitation •Media Discard																															x					
637	IT Service Management	Methodology		Staffing	-Maintenance of Quality and Skills	•Interview (Periodic, Non-Periodic) •Individual Performance Goals Setting •Goals Setting Progress Review •Educational Plan Formulation																															x					
638	IT Service Management	Methodology		Staffing	-Work Schedule Management	•Understanding of Work Schedule •Understanding of Personal Schedule •Deployment of Appropriate Personnel and Number of Personnel																															x					
639	IT Service Management	Personal		Customer Support Skills	-Human Interaction Skills	•Good Diction •Understanding for Real Intention of Other Party																																x				
640	IT Service Management	Personal		Customer Support Skills	-Listening Skills	•Merits of Positive Listening •Basis for Listening •Repetition Method																																x				
641	IT Service Management	Personal		Customer Support Skills	-Listening Skills	•Clear Diction •Appropriate Expression of Sympathy •Appropriate Usage of Terminology																																	x			
642	IT Service Management	Personal		Customer Support Skills	-Writing Skills	•Records of Incident, etc. •Email Creation Manners •Report Creation																																	x			
643	IT Service Management	Technology		Knowledge Management	-Significance of Knowledge Management	•Advantage of Knowledge Management •Knowledge Management Process																																	x			
644	IT Service Management	Technology		Knowledge Management	- Knowledgebase	•Knowledge-base Contents •Knowledge-based Formulation and Maintenance																																	x			
645	IT Service Management	Technology		Knowledge Management	-FAQ	•FAQ Creation Procedure •FAQ Release																																	x			
646	IT Service Management	Technology		Knowledge of Infrastructure for Support Center	-Computer Telephony	•Function of CTI •Merits of CTI •Consideration on CTI Installation																																	x			
647	IT Service Management	Technology		Knowledge of Infrastructure for Support Center	-Call Tracking System	•Function of CTS •Merits of CTS •Consideration on CTS Installation																																	x			
648	IT Service Management	Technology		Knowledge of Infrastructure for Support Center	-Incident Management System	•Function of Incident Management System •Merits of Incident Management System •Consideration on Installation of Incident Management System																																	x			
649	IT Service Management	Technology		Knowledge of Infrastructure for Support Center	-Knowledge Management System	•Function of Knowledge Management System •Merits of Knowledge Management System •Consideration on Installation of Knowledge Management System																																	x			
650	IT Service Management	Technology		Individual Activity	-Business Knowledge	•Business Take-Over •Business Instruction																																	x			

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							Marketing			Sales		Consultant		IT Architect			Project Management		IT Specialist					Application Specialist		Software Development		Customer Service		IT Service Management			Education						
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651	IT Service Management	Methodology		Staffing	-Maintenance of Staff Quality and Skills	•Development Plan •Skills Management •Training Course Development •Training																															x		
652	IT Service Management	Methodology		Staffing	-Work Schedule Management	•Forecast of Call Volume •Determination of Level and Number for Required Staff •Work Schedule Creation																															x		
653	IT Service Management	Methodology		Service Desk Management Index	-Measurement Index	•Average Response Time •Abandon Rate •Talk Time •Availability •Percent of Requests Solved •Customer Satisfaction																															x		
654	IT Service Management	Methodology		Service Desk Management Index	-Monitoring Techniques	•Monitoring Techniques																															x		
655	IT Service Management	Methodology		Service Support	-Incident Management Process	•Incident Acceptance •Incident Records •Incident Resolution, or Dispatch •Incident Progress Management •Incident Closure																															x		
656	Education	Technology	Understanding of Training Industry Trends		-Market Research Concept and Methodology	•Markets Definition •Understanding of Whole Market •Market Analysis •Market Research Objectives Setup •Preparation of Market Research Plans •Market Research Design •Market Research Implementation •Verification of Hypotheses																																x	x
657	Education	Technology	Understanding of Training Industry Trends		-Market Analysis	•Analysis of Macro Environments •Analysis of Customers •Analysis of Competition •Analysis of Internal Environments (Analysis of Company's Strengths and Weaknesses) •Analysis of Market Opportunities •Measurement of Market Demand																																x	x
658	Education	Technology	Understanding of Training Industry Trends		-Financial Analysis	•Utilization of Knowledge for Financial Statements •Analysis and Understanding of Management Indicators •Understanding and Utilization of Financial Analysis Technique •Analysis and Understanding of Financial Status																																x	x
659	Education	Technology	Understanding of Training Industry Trends		-Understanding and Utilization of Analysis Tools and Models	•Business Life Cycle Models (Introduction Stages, Growth Stages, Maturity Stages, Decline Stages) •Product Portfolio Management (PPM) Model •Experience Curve •3C Analysis •SWOT Analysis •7S Models •Michael Porter's Five Forces Model •Value Chain Analysis •Others																																x	x
660	Education	Technology	Understanding of Training Industry Trends		-Latest Training Equipment and Tools	•Understanding and Utilization of Latest Training Equipment •Understanding and Utilization of Latest Training Tools																																x	x
661	Education	Technology	Understanding of Training Industry Trends		-Knowledge of Learning Technology	•Understanding and Utilization of Industry Standards •Understanding and Utilization of Technology Trend																																x	x
662	Education	Technology	Understanding of Training Industry Trends		-Knowledge of Training Industry	•Understanding and Utilization of Industry Trend •Understanding and Utilization of Market Analysis Results																																x	x
663	Education	Methodology		Analysis, Design, and Management	-Participant Needs, Market Needs	•Understanding of Demands, Needs and Wants for Participants																																x	

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664	Education	Methodology		Analysis, Design, and Management	-Design of Lectures and Courses	•Creation of Lecture and Course Systems •Solutions Design																																		x								
665	Education	Methodology		Analysis, Design, and Management	-Lecture Management and Course Management	•Performance Management •Participants Satisfaction •Management of Intellectual Property																																			x							
666	Education	Methodology		Analysis, Design, and Management	-Understanding and Utilization of Analysis Tools and Models	•Business Life Cycle Models (Introduction Stages, Growth Stages, Maturity Stages, Decline Stages) •Product Portfolio Management (PPM) Model •Experience Curve •3C Analysis •SWOT Analysis •7S Models •Michael Porter's Five Forces Model •Value Chain Analysis •Others																																			x							
667	Education	Methodology		Analysis, Design, and Management	-Planning of Lectures and Courses	•Preparation of Roadmaps •Course Planning																																				x						
668	Education	Methodology		Analysis, Design, and Management	-Latest Trends in IT Market	•Understanding of IT markets Scales and Trends Domestic and Abroad •Understanding of Application-related Technology Trends •Understanding of Technology Trends in Business Model Patents •Understanding of Next Generation E-Business and its Development																																				x						
669	Education	Methodology		Analysis, Design, and Management	-Latest Technology Trends	•Understanding of Latest Hardware Technology Trends •Understanding of Latest Middleware Technology Trends •Understanding of Latest Platform Technology Trends •Understanding of Latest Network Technology Trends •Understanding of Latest Database Technology Trends •Understanding of Latest Security Technology Trends •Understanding of Latest System Management Technology Trends																																					x					
670	Education	Methodology		Analysis, Design, and Management	-Market Research Concept and Methodology	•Markets Definition •Understanding of Whole Market •Market Analysis •Market Research Objectives Setup •Preparation of Market Research Plans •Market Research Design •Market Research Implementation •Verification of Hypotheses																																					x					
671	Education	Methodology		Instruction Methods	-Instruction Techniques	•Objectives Setting •Educational Technique •Media Selection •Curriculums Creation •Utilization and Practice of Presentation Techniques																																						x				
672	Education	Methodology		Instruction Methods	-Assessment Methods	•Objectives Setting •Clarification of Milestones •Clarification of Problems •Execution •Feedback •Effects Measurement																																							x			
673	Education	Methodology		Instruction Methods	-Facilitation	•Objective Setting •Motivating Participants and Providing Sense of Achievement •Attentive Listening •Views Coordination •Exercise of Executive Abilities •Utilization and Practice of Operation Method for Training Courses •Effects Measurement																																									x	

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674	Education	Methodology		Course Development	-E-learning Development	・Understanding of Contents Development Processes ・Technical Expression of Contents ・E-Learning Platforms Architecture ・Utilization of Learning Management Systems ・Utilization of Authoring Tools ・Utilization of Modularization ・Standardization of E-Learning																																			x
675	Education	Methodology		Course Development	-Development of Lectures and Courses	・Contents Development ・Instructional Design																																			x
676	Education	Methodology		Specialty in Assigned Training Areas	-Specialty in Assigned Training Area	・Acquisition and Utilization of Expertise																																			x