

Group Examination Analysis

Test Code: 7971, v1 - Certified Manufacturing Engineer (CMfgE)
 Test Date: 12/01/2012
 Number of Candidates: 50
 Site Code: 7555

Examination Analysis	
Number of Candidates:	50
Low Score:	38
Mean:	89
High Score:	115
Number of Questions:	180
Pass Score:	108
International Average:	58.0%
Standard Deviation:	21.1
Standard Error of the Measurement:	6.7
KR20:	0.92

CMfgE

2012年12月1日に東京・名古屋で受験された50名の試験結果の分析です。タイトルは、テキストおよび2010年の“Body of Knowledge”に合わせて整理されています。

Group Examination Performance

Level/Title	# of Items in Section	Total Items Seen by Group	Total Items Passed by Group	Performance	Percent
1 1.1 Mathematics	16	800	418		52.3%
1.1.3 Analytical Geometry	2	100	53		53.0%
1.1.4 Calculus	2	100	39		39.0%
1.2.1 Metrication/SI System	1	50	27		54.0%
1.2.2 Physics	1	50	21		42.0%
1.2.8 Electrical Circuits/Electronics	2	100	58		58.0%
1.3.1 Metals (Properties and Applications)	4	200	143		71.5%
1.3.2 Plastics/Polymers (Properties and Applications)	2	100	57		57.0%
1.3.3 Composites (Properties and Applications)	2	100	20		20.0%
2 2.1 Product Design and Development	13	650	312		48.0%
2.1.2 Market/Sales/Life Cycle Analysis	3	150	50		33.3%
2.1.4 Design Management	1	50	13		26.0%
2.1.5 Simulation/Engineering Design Analysis	2	100	63		63.0%
2.1.6 Concurrent Engineering	1	50	7		14.0%
2.1.7 Design for X (Mfg/Assy/Maint/etc.)	1	50	32		64.0%
2.1.8 Drafting/Drawing/Engineering Graphics/Modeling	2	100	59		59.0%
2.1.10 Tolerance Analysis/GD & T	2	100	63		63.0%
2.1.11 Product Liability	1	50	25		50.0%
3 2.2 Process Design and Development	6	300	125		41.7%
2.2.2 Simulation/Process Analysis	3	150	56		37.3%
2.2.6 Rapid Prototyping	3	150	69		46.0%
4 3.1 Manufacturing Process Applications and Operation	26	1,300	713		54.8%
3.1.1 Material Removal Processes	3	150	38		25.3%
3.1.2 Manufacturing Process Applications & Operation	1	50	12		24.0%
3.1.3 Hot and Cold Forming Processes	4	200	122		61.0%
3.1.4 Casting and Molding Processes	3	150	59		39.3%
3.1.5 Electrical/Electronics Mfg. Processes	3	150	92		61.3%
3.1.6 Heat Treatment Processes	2	100	84		84.0%
3.1.7 Joining, Welding, and Assembly Processes	5	250	157		62.8%
3.1.8 Finishing Processes	3	150	107		71.3%

	Level/Title	# of Items in Section	Total Items Seen by Group	Total Items Passed by Group	Performance	Percent
4	3.1 Manufacturing Process Applications and Operation	26	1,300	713		54.8%
	3.1.10 Material Handling/Packaging	2	100	42		42.0%
5	4.1 Production System Design and Development	23	1,150	494		43.0%
	4.1.2 Facility Planning/Plant Layout	1	50	12		24.0%
	4.1.3 Process Planning and Development	3	150	107		71.3%
	4.1.4 Capacity Planning	3	150	33		22.0%
	4.1.5 Production/Manufacturing System Design and Organization	4	200	105		52.5%
	4.1.6 Process Documentation/Work Instructions	1	50	26		52.0%
	4.1.7 Tool and Equipment Selection	4	200	94		47.0%
	4.1.9 Human Factors, Ergonomics, and Safety	2	100	13		13.0%
	4.1.10 Maintenance Systems	3	150	51		34.0%
	4.1.11 Environmental Protection/Waste Management	2	100	53		53.0%
6	4.2 Equipment/Tool Design and Development	13	650	441		67.8%
	4.2.1 Cutting Tool Design	3	150	94		62.7%
	4.2.2 Work Holding Tool Design	5	250	158		63.2%
	4.2.3 Die/Mold Design	3	150	112		74.7%
	4.2.6 Power Systems (Mech/Elec/Fluid)	2	100	77		77.0%
7	5.1 Automated Systems and Control	13	650	306		47.1%
	5.1.1 Automated Systems (Hard/Flexible)	3	150	56		37.3%
	5.1.2 CNC/PLC/Computer Control	8	400	211		52.8%
	5.1.3 Computer Systems and Networks	1	50	23		46.0%
	5.1.4 Information Technology/Database Systems (MIS, etc.)	1	50	16		32.0%
8	6.1 Quality and Customer Service	24	1,200	638		53.2%
	6.1.2 Quality System and Standards (e.g. QS/ISO/CE/Mark/etc.)	2	100	50		50.0%
	6.1.3 Probability and Statistics	2	100	56		56.0%
	6.1.4 Statistical Control Methods (Sampling/Charting/etc.)	3	150	82		54.7%
	6.1.5 Problem Analysis and Solving (Fishbone/Pareto/FMEA/etc.)	1	50	23		46.0%
	6.1.6 Factor Analysis (DOE/Correlation/etc.)	1	50	21		42.0%
	6.1.7 Capability Analysis (Process/Equipment/etc.)	3	150	64		42.7%
	6.1.8 Inspection/Test/Validation	4	200	103		51.5%
	6.1.9 Metrology	3	150	92		61.3%
	6.1.11 Continuous Improvement/Lean	5	250	147		58.8%
9	7.1 Manufacturing Management	27	1,350	639		47.3%
	7.1.2 Organizational Design and Management	3	150	88		58.7%
	7.1.3 Project Management	1	50	35		70.0%
	7.1.4 Personnel Management Methods	4	200	66		33.0%
	7.1.8 Operations Research, Analysis, and Forecasting	2	100	57		57.0%
	7.1.9 Supply Chain & Logistics	5	250	76		30.4%
	7.1.10 Accounting/Finance/Economics	7	350	160		45.7%
	7.1.11 Business/Engineering Ethics and Social Responsibility	2	100	33		33.0%
	7.1.12 Standards, Laws, and Regulations	3	150	124		82.7%
10	8.1 Personal Effectiveness	19	950	395		41.6%
	8.1.1 Interpersonal Skills	2	100	36		36.0%
	8.1.2 Negotiating and Conflict Management	5	250	80		32.0%
	8.1.3 Presentation Skills and Oral Communication	5	250	120		48.0%
	8.1.4 Written Communication Skills	4	200	77		38.5%
	8.1.5 Innovation and Creativity	1	50	33		66.0%
	8.1.6 Learning and Knowledge	2	100	49		49.0%