11111111: EXAMINEE NAME

Examination Analysis

Site Code: 3360, SME
Name: EXAMINEE NAME
ID: 11111111
Test Code: 9182, v1 - Certified Manufacturing Engineer (CMfgE)
Test Date: 01/01/2022
Pass Percent: 60.00%
Score: 73.4%
Status: Pass

	Level/Title	# of Items in Section	# of Items Passed	Performance	Percent
1	1.1 Mathematics	7	5		71.4%
	1.1.1 Algebra	1	1		100.0%
	1.1.2 Trigonometry	2	2		100.0%
	1.1.3 Analytical Geometry	1	0		0.0%
	1.1.4 Calculus	2	1		50.0%
	1.1.6 Measurement	1	1		100.0%
2	1.2 Print Reading	2	2		100.0%
	1.2 Print Reading	2	2		100.0%
3	1.3 Geometric Dimensioning and Tolerancing	2	2		100.0%
	1.3.2 Tolerance Analysis	2	2		100.0%
4	1.4 Engineering Science	4	1		25.0%
	1.4.1 Chemistry	1	1		100.0%
	1.4.2 Physics	1	0		0.0%
	1.4.3 Fluid Mechanics	1	0		0.0%
	1.4.7 Electrical Circuits and Electronics	1	0		0.0%
5	1.5 Environmental Health and Safety	7	6		85.7%
	1.5.2 New Technologies Safety	1	1		100.0%
	1.5.3 Hazardous Materials	1	1		100.0%
	1.5.4 Personal Protective Equipment	1	1		100.0%
	1.5.5 Situational Awareness	3	2		66.7%
	1.5.6 Ergonomics	1	1		100.0%
6	1.6 Ethics	2	2		100.0%
	1.6 Ethics	2	2		100.0%
7	2.1 Materials Process Application of:	5	4		80.0%
	2.1.1 Metals	2	2		100.0%
	2.1.2 Plastics/Polymers	2	1		50.0%
	2.1.3 Composites	1	1		100.0%
8	2.2 Manufacturing Processes	20	19		95.0%
	2.2.2 Subtractive Manufacturing/Material Removal	4	4		100.0%
	2.2.3 Fabrication	1	1		100.0%
	2.2.3.1 Hot and Cold Forming	3	3		100.0%
	2.2.3.2 Casting and Molding	2	2		100.0%
	2.2.4 Electrical/Electronics Manufacturing	1	1		100.0%
	2.2.5 Treatments (e.g. heat treatment) and Coatings	2	2		100.0%
	2.2.6 Finishing	1	1		100.0%
	2.2.7 Joining, Welding and Assembly	4	3		75.0%
	2.2.8 Material Handling and Packaging	2	2		100.0%
9	3.1 Intellectual Property Protection	3	3		100.0%
	3.1.1 Patents	1	1		100.0%
	3.1.2 Trademarks	1	1		100.0%
	3.1.4 Trade Secrets	1	1		100.0%

	Level/Title	# of Items in Section	# of Items Passed	Performance	Percent
10	3.2 Computer-Aided Design/Drafting/Engineering Graphics/Modeling/Bill of M	6	3		50.0%
	3.2.1 Software	1	0		0.0%
	3.2.3 3D vs. 2D Scan and Print	1	0		0.0%
	3.2.4 Drafting Standards Mechanism	1	1		100.0%
	3.2.5 Computer-Aided Drafting	2	1		50.0%
	3.2.6 Bill of Materials	1	1		100.0%
11	3.3 Concurrent Engineering/Design for X	4	2		50.0%
	3.3.1 Manufacture	1	0		0.0%
	3.3.2 Assembly	1	1		100.0%
	3.3.6 Reliability	1	1		100.0%
	3.3.8 Affordability	1	0		0.0%
12	3.4 Computer-Aided Engineering (CAE) Design and Manufacturing Tools	4	4		100.0%
	3.4.1.1 Process Simulation	1	1		100.0%
	3.4.1.2 Structural Analaysis	1	1		100.0%
	3.4.1.4 Design for process variables	1	1		100.0%
	3.4.1.5 Engineering Design Analysis	1	1		100.0%
13	3.5 Equipment/Tool Design and Development	7	3		42.9%
	3.5.1 Cutting Tool Design	1	1		100.0%
	3.5.2 Workholding Tool Design	1	0		0.0%
	3.5.3 Die/Mold Design	1	0		0.0%
	3.5.4 Gage Design	1	0		0.0%
	3.5.5 Machine Design	1	1		100.0%
	3.5.6 Power Systems Design (Mech/Elec/Fluid)	1	1		100.0%
	3.5.8 Nanotechnology	1	0		0.0%
14	3.6 Additive Manufacture/3D Printing Applications	4	4		100.0%
	3.6.1 Rapid Prototyping	1	1		100.0%
	3.6.2 Production Parts	1	1		100.0%
	3.6.3 Tooling	1	1		100.0%
	3.6.4 3D Scan and Print	1	1		100.0%
15	4.1 Digital Organization	2	1		50.0%
	4.1.1 Governance	1	0		0.0%
	4.1.5 Risk Stratgey	1	1		100.0%
16	4.2 Industrial Internet of Things	3	2		66.7%
	4.2.2 Data Collection	1	1		100.0%
	4.2.4 Organizational Technology	1	0		0.0%
	4.2.5 Considerations for 3D printing	1	1		100.0%
17	4.3 Data Science	2	0		0.0%
	4.3.1 Cloud Computing	1	0		0.0%
	4.3.2 Data Analytics	1	0		0.0%
18	4.4 Digital Performance Management (DPM)	1	0		0.0%
	4.4.1 Visualization	1	0		0.0%
19	4.5 Artificial and Augmented Intelligence	1	1		100.0%
	4.5.1 Machine Learning	1	1		100.0%
20	4.6 Machine Health, Asset Optimization and Industrial Maintenance	3	3		100.0%
	4.6.2 Prevenative Maintenance	1	1		100.0%
	4.6.3 Predictive Maintenance	1	1		100.0%
	4.6.4 Total Productive Maintenance	1	1		100.0%
21	4.7 Digital Twin	1	1		100.0%
	4.7 Digital Twin	1	1		100.0%
22	5.1 Controls	2	1		50.0%
	5.1.1 Computer Numerical Controls (CNC)	1	1		100.0%
	5.1.2 Programmable Logic Controls (PLC)	1	0		0.0%
23	5.2 Computer Systems and Networks	4	2		50.0%
	5.2.3 Enterprise-wide Systems Integration	2	1		50.0%
	5.2.4 Database Systems	2	1		50.0%
24	5.3 Supply Chain	6	6		100.0%

	Level/Title	# of Items in Section	# of Items Passed	Performance	Percent
24	5.3 Supply Chain	6	6		100.0%
	5.3.2 Capacity Planning	2	2		100.0%
	5.3.4 Demand Forecast for Products	2	2		100.0%
	5.3.6 Supplier Performance Data (informed contract negotiations)	1	1		100.0%
	5.3.7 Supply Planning	1	1		100.0%
25	5.4 Robotics	1	1		100.0%
	5.4.4 Fixed Route and Intelligent Navigation of Automated Robots	1	1		100.0%
26	6.1 Total Quality Management (TQM)	4	3		75.0%
	6.1.1 Quality Management Systems (QMS)	1	1		100.0%
	6.1.2 Audits	1	1		100.0%
	6.1.4 Quality Standards (e.g., QS, ISO, etc.)	2	1		50.0%
27	6.2 Statistical Control Methods	10	8		80.0%
	6.2.1 Problem Analysis & Solving (e.g. Fishbone, Pareto, etc.)	3	1		33.3%
	6.2.2 Factor Analysis (e.g. Design of Experiments (DOE),Correlation, etc.)	1	1		100.0%
	6.2.3 Capability Analysis	3	3		100.0%
	6.2.4 Reliability Analysis	3	3		100.0%
28	6.3 Inspection, Test and Validation	10	7		70.0%
	6.3.1 Metrology	3	3		100.0%
	6.3.3 Test	3	2		66.7%
	6.3.4 Validation and Compliance	1	0		0.0%
	6.3.5	3	2		66.7%
29	6.4 Quality for Additive Manufacturing	3	0		0.0%
	6.4.1 Inspection Methods	1	0		0.0%
	6.4.2 Secondary Processes	1	0		0.0%
	6.4.3 Defect Inspection	1	0		0.0%
30	7.1 Systems, Processes and Tools (e.g. Lean, Six Sigma, etc.)	11	8		72.7%
	7.1.1 Benchmarking	1	1		100.0%
	7.1.2 Business Process Management (BPM)	1	0		0.0%
	7.1.3 Just-in-Time Manufacturing	2	1		50.0%
	7.1.7 Kanban/Pull Systems	1	1		100.0%
	7.1.9 Cellular Manufacturing	1	0		0.0%
	7.1.12 Root Cause Analysis	1	1		100.0%
	7.1.13 Statistical Process Control	2	2		100.0%
	7.1.14 Theory of Constraints	1	1		100.0%
	7.1.16 Single Minute Exchange of Dies (Quick Changeover)	1	1		100.0%
31	7.3 Quality, Cost and Delivery (QCD)	9	8		88.9%
	7.3 Quality, Cost and Delivery (QCD)	1	1		100.0%
	7.3.1 Takt Time	3	3		100.0%
	7.3.2 Cycle Time	1	0		0.0%
	7.3.3 Lead Time	1	1		100.0%
	7.3.4 Inventory Turns	1	1		100.0%
	7.3.5 Queue Time	1	1		100.0%
	7.3.7 Overall Equipment Effectiveness (OEE)	1	1		100.0%
32	8.1 Soft Skills/Personal Effectiveness	11	9		81.8%
	8.1.1 Managing in a Digital Environment	2	2		100.0%
	8.1.2 Interpersonal Skills	1	1		100.0%
	8.1.3 Negotiating and Conflict Management	3	1		33.3%
	8.1.4 Presentation Skills and Oral Communication	3	3		100.0%
	8.1.5 Written Communication Skills	2	2		100.0%
33	8.2 Project Management	3	2		66.7%
	8.2.1 Traceability	1	1		100.0%
	8.2.2 Block Chain	1	0		0.0%
	8.2.3 Managing Global Supply Chains	1	1		100.0%
34	8.3 Finance	7	2		28.6%
	8.3.2 Engineering Economics	4	1		25.0%
	8.3.3 Cost Justification	3	1		33.3%

	Level/Title	# of Items in Section	# of Items Passed	Performance	Percent
35	8.4 Training and Development	1	1		100.0%
	8.4.3 Talent Management as a Service	1	1		100.0%
36	8.0 Business Acumen	1	1		100.0%
	8.5 Labor Relations	1	1		100.0%