

Block	% Block on Exam	NOA Task	Sub tasks
A - COMMON OCCUPATIONAL SKILLS	14%	Performs safety-related functions	Maintains safe work environment. Uses personal protective equipment (PPE) and safety equipment.
		Uses and maintains machine-tools and tooling	Uses hoisting and lifting equipment. Maintains machine-tools and tooling.
		Organizes work	Interprets drawings, specifications and applications. Plans project activities.
		Performs benchwork	Performs layout. Marks material for identification. Inspects workpiece. Finishes workpiece.
B - MACHINE-TOOL SETUP AND OPERATION	28%	Plans and prepares for machine-tool operations	Plans machining sequence. Establishes workpiece datum. Sets up work holding devices in machine-tools. Sets up machine tooling and accessories. Sets up workpiece in machine-tool. Selects speeds and feeds of machine-tools.
		Operates conventional drill presses, lathes and milling machines.	Performs hole making and finishing operations. Turns surfaces using lathe. Faces surfaces using milling machine. Performs parting, grooving and knurling using lathe. Cuts internal and external threads using lathe. Performs profiling, pocketing and slotting using milling machine.
		Operates power saws	Saws straight and angle cuts. Cuts irregular shapes.
		Operates grinders	Mounts grinding wheel. Grinds flat surfaces. Grinds profiles and tapered surfaces.
		Operates computer numerical control (CNC) machines	Performs basic CNC programming. Inputs program data into control memory. Sets up workpiece datum. Verifies programs. Monitors machining processes.
		Operates Electrical Discharge Machines (EDM)	Determines flushing methods. Sets cutting conditions.
C -PROTOTYPES	10%	Develops prototype	Selects prototyping technique and materials. Fabricates prototype components. Assembles prototype components.
		Proves out prototypes	Inspects prototype. Evaluates function of prototype. Resolves malfunction of prototype.
D - HEAT TREATMENT	11%	Heat treats materials	Selects heat treating process. Hardens materials. Tempers materials. Anneals materials. Normalizes materials. Carburizes materials.
		Tests heat treated materials	Performs visual inspection. Performs hardness test.
		Performs basic production tool design	Identifies production tool requirements. Prepares shop sketches. Determines production tool material specifications and engineered components. Prepares information for drafting.

E - PRODUCTION TOOL DESIGN AND DEVELOPMENT	37%	Fits and assembles production tools	<ul style="list-style-type: none"> Verifies dimensions of production tool components. Positions production tool components. Performs final assembly. Sets production tool timing.
		Proves out production tool	<ul style="list-style-type: none"> Sets up production tools. Verifies production part material. Develops blank. Cycles equipment with production tools. Evaluates production part. Checks production tool for damage. Modifies production tools to enhance productivity.
		Repairs and maintains production tools	<ul style="list-style-type: none"> Identifies condition of production tools. Identifies repair procedures. Adjusts production tool components.