EXAMINATION BLUEPRINT
STS3

Domain 1
Safety Program Implementation • 13.8%

Knowledge of:

1. Job safety/hazard analysis process
2. Basic audit or inspection protocols and tools
3. Inspection requirements (e.g., machine guarding, hose, grinding wheels, ladders, safety showers, and eye wash stations)
4. Incident investigation techniques (e.g., root cause analysis, five whys, fishbone), documentation requirements, and corrective action implementation
5. Basic waste management (e.g., proper disposal of batteries, paint, and light bulbs)

Skill to:

1. Pre-plan work and manage cross-functional hazards associated with a project
2. Address changing conditions or tasks in the job safety/hazard analysis process
3. Effectively communicate in writing or verbally the findings of audits or inspections (e.g., follow-ups)
4. Recognize what is a potential violation relating to waste, emissions, or stormwater pollution (e.g., spills, releases)

Domain 2
Hazard Identification and Control • 47.1%

Knowledge of:

1. Hierarchy of controls (e.g., elimination, substitution, engineering, administrative, personal protective equipment [PPE])
2. Globally Harmonized System of Classification and Labeling of Chemicals (GHS) (e.g., labels, safety data sheets [SDS], pictograms, signal words)
3. Energy isolation procedures (e.g., lockout/tagout)
4. Hazards and controls associated with handling and storing hazardous materials or chemicals
5. Safety systems/interlocks (e.g., electrical systems, critical support systems)
6. Hazards and controls associated with working around pressurized systems (e.g., steam systems)
7. Confined space requirements (e.g., identification, permits, entry, rescue)
8. Hazards and controls associated with working at heights (e.g., fall prevention and protection methods)
9. Hazards and controls associated with walking/working surfaces (e.g., slips, trips, and falls)
10. Hazards and controls associated with elevated work platforms (e.g., aerial lift, scaffolding, lifts, stairways)
11. Requirements for operating and inspecting power industrial equipment/trucks (PIT), including forklifts (e.g., checklists, certifications, competencies, pedestrian safety)
12. Hazards and controls associated with hand and power tools (e.g., hammers, grinders)
13. Hazards and controls associated with working around moving parts and pinch points (e.g., machine guarding, pulleys)
14. Hazards associated with housekeeping (e.g., materials storage, clutter, staging, fire hazards)
15. Hazards and controls associated with hot work (e.g., welding, burning, cutting, grinding)
16. Safety operations associated with cranes and lifting devices (e.g., pre-operation inspection, checking manufacturer use standards, chain fall, load ratings)
17. Safety procedures associated with rigging and hoisting (e.g., inspection of rigging equipment, load limitations of rigging, use of tag lines)
18. Types and proper use of personal protective equipment (PPE)
19. Electrical safe work practices (e.g., arc flash, temporary power cord safety, ground fault circuit interrupter [GFCI])
20. Hazards and controls associated with excavations (e.g., depth, distance, barricades, spoil pile location, basic soil classifications, emergency exits)
21. Basic concepts in ergonomics (e.g., proper lifting techniques, repetitive stress or injury, neutral posture)
22. Office safety procedures (e.g., only open one file cabinet drawer at a time, kitchen appliance safety)
23. Safety procedures associated with motor vehicle operation (e.g., seat belts, loading docks, chocking of wheels)
24. Safety procedures associated with heavy equipment operation (e.g., front-end loaders, backhoes, excavators)
25. Hazards associated with using technology while working (e.g., distraction caused by use of personal electronic devices)
26. Hazards and controls associated with compressed gas storage and use (e.g., fuel gas, oxygen storage, ammonia tanks, liquefied petroleum gas cylinders)

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Domain 3

Health Hazards and Basic Industrial Hygiene • 9.2%

Knowledge of:

1. Chronic health hazards and controls (e.g., asbestos, lead, silica, mold, chromium-6)
2. Acute health hazards and controls (e.g., welding fume fever, poisoning, sensitivity, irritation)
3. Hazards and controls associated with hearing conservation
4. Environmental conditions that could impact worker health or safety (e.g., heat and cold stress)

Domain 4

Emergency Preparedness and Management • 11.5%

Knowledge of:

1. Fire protection methods and classifications (e.g., appropriate fire extinguishing method for materials)
2. Fire safety requirements (e.g., monthly inspections, fire extinguisher locations, fire exits, emergency lighting)
3. Emergency response plans and drills (e.g., natural disasters, weather, crisis, fire, alarms, evacuation, rescue procedures, workplace violence and security)
4. Basic first aid, cardiopulmonary resuscitation (CPR), and automated external defibrillator (AED)
5. Universal precautions (e.g., bloodborne pathogens)

Domain 5

Leadership, Communication, and Training • 18.4%

Knowledge of:

1. BCSP Code of Ethics
2. Conflict resolution techniques (e.g., how to de-escalate a situation)
3. Behavioral-based safety observations and programs
4. Training requirements (e.g., frequency, training needs) for a project or job task

Skill to:

1. Effectively communicate safety information to employees, management, contractors, or other affected personnel
2. Coach or mentor employees on safe behavior and practices
3. Correct unsafe acts or conditions (e.g., stop work and correct)
4. Influence behavior within a diverse and changing workforce (e.g., motivation techniques for different personalities or learning styles, ability to empathize with workers)
5. Recognize when negative reinforcement (e.g., discipline) or escalation is needed to deal with safety behavior issue
6. Recognize when to seek assistance in relation to a hazard or situation
7. Manage worker limitations and apply accommodations as required by company or regulatory standards (e.g., fit for duty, job restrictions)
8. Identify relevant compliance aspects of a project or job task (e.g., bloodborne pathogens, ladder safety)

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