The following table indicates the approximate percentage (%) of exam content (exam items) for the five (5) major domain areas and the sub-components of those domain areas:

I. Understand Employer's Responsibilities
   A. Implement the employer's electrical safety program
      i. Identify safety program principles
      ii. Identify safety program controls
   B. Recognize electrical safety program audit requirements
      i. Recognize audit principles and procedures
      ii. Recognize the required frequency of audits
      iii. Recognize when revisions to the safety program are appropriate
   C. Identify requirements for a job briefing
   D. Recognize requirements for host employer and contractor relations

II. Understand Electrical Safety-Related Work Practices
    A. Identify and define terminology related to electrical safety
    B. Identify the requirements for qualified and unqualified persons related to electrical equipment and systems
       i. Identify the requirements for a person to be qualified
       ii. Identify the training requirements
          a. Qualified persons
          b. Unqualified persons
       iii. Identify tasks only a qualified worker can perform
    C. Recognize potential electrical hazards
       i. Identify the hazards associated with energized electrical conductors and circuit parts
          a. Recognize when a shock hazard exists
          b. Recognize when an arc flash and arc blast hazard exists
          c. Recognize that incident energy levels change with respect to location in the system or equipment
       ii. Explain the relationship between electrical hazards and potential injuries
          a. Contact injuries (e.g., current flow through tissue, burn)
          b. Arc flash and arc blast injuries (e.g., thermal burn, hearing damage, concussion)
       iii. Identify methods to control the risk associated with electrical hazards
          a. Hazard elimination (i.e., create an electrically-safe work condition)
          b. Substitution (e.g., use of non-electrical equipment, battery-operated hand tools)
          c. Engineering control (e.g., GFCIs, barriers)
          d. Awareness controls (e.g., signs, labels, barricades)
          e. Administrative controls (e.g., training, job planning, procedures)
          f. Personal protective equipment (e.g., insulated tools, arc-rated apparel, voltage-rated gloves)
    D. Identify emergency procedures for assisting victims of electrical incidents
       i. Identify methods of release from contact
       ii. Identify emergency response requirements

III. Identify the Requirements for Establishing an Electrically-Safe Work Condition
    A. Identify requirements for de-energization according to employer program
    B. Recognize that all possible sources of electric supply must be identified
       i. Recognize requirements for single-line diagrams
       ii. Recognize that disconnecting means must be located for each power source

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C. Recognize the requirement to visually verify isolation where possible
D. Identify the employer's documented and established policy to apply lockout/tagout (LOTO) devices
E. Identify the steps to verify the absence of voltage
F. Recognize the requirements for temporary protective grounding equipment
G. Identify the components and elements of the LOTO program and procedures
   i. Training
   ii. Procedures
   iii. Forms of control
      a. Simple
      b. Complex
   iv. Coordination
   v. Equipment
   vi. Elements of control

IV. Identify Precautionary Techniques for Work Involving Electrical Hazards
   A. Identify justification for not establishing an electrically-safe work condition
      i. Greater hazard to de-energize
      ii. Infeasibility
      iii. Less than 50 volts (consider capacity)
   B. Determine energized electrical work permit requirements
      i. Identify the permit elements
      ii. Identify exemptions to the permit
   C. Understand the requirements for an electrical hazard analysis
      i. Identify the components of a shock hazard analysis
         a. Recognize the requirement to identify the voltage of electrical conductors and circuit parts
         b. Explain the shock approach boundaries and their use
      ii. Identify the components of an arc flash hazard analysis
         a. Describe incident energy
         b. Understand the effect of clearing time, short circuit current, and worker distance on incident energy
         c. Interpret hazard information conveyed on equipment labels
         d. Explain the arc flash boundary and its use
         e. Understand the use of the hazard/risk category classification method
            1. Understand that the tables incorporate risk
            2. Understand that the tables are task/equipment based
            3. Identify table limiting parameters
      iii. Verify compliance with PPE requirements for electrical hazards
         a. Understand the PPE requirements for electrical hazards
            1. Head, face, neck, and chin protection
            2. Eye protection
            3. Hearing protection
            4. Body protection
               a) Arc-rated garments
               b) Layering
               c) Underlayers
            5. Hand and arm protection
            6. Foot and leg protection
b. Understand the requirements for the care and maintenance of PPE
   1. Testing
   2. Inspection
   3. Care, maintenance, and storage
   c. Ensure no prohibited materials are worn
   d. Understand PPE ratings
      1. Voltage rating
      2. Arc rating
   e. Understand limitations of PPE
   f. Understand the use of Table H.3(a) and H.3(b) in Annex H to select appropriate PPE when an incident energy analysis is performed and PPE requirements are not provided
   g. Understand the use of PPE requirements when using the hazard/risk category classification method

   iv. Recognize requirements for other protective equipment (e.g., insulated tools, ladders, shields)
   v. Identify situations where equipment failure may occur

D. Understand the requirements for reenergizing circuits after operation of overcurrent protective devices (OCPD)

E. Understand the requirements related to the use of test instruments
   i. Verify that employees are properly trained on each test instrument they will use
   ii. Verify that all test instruments used are adequately rated

F. Understand the use of other equipment
   i. Understand the appropriate use of portable electric equipment
   ii. Verify that field tests of GFCI protection devices occur in accordance with the manufacturer's recommendations
   iii. Verify that visual and mechanical inspections of portable electric equipment and cord sets occur as required

G. Understand the required use of alerting techniques
   i. Signs and tags
   ii. Barricades
   iii. Attendants
   iv. Identification of lock-alike equipment

V. Understand Documentation Requirements
   A. Electrical safety program
   B. Host-contractor meeting
   C. Training
   D. LOTO procedure
   E. Electrical safety audit
   F. Energized electrical work permit
   G. Equipment labeling
   H. Incident energy analysis
   I. Maintenance, tests, and inspection
   J. Single line diagrams

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