Certified Hemodialysis BioMedical Technologist
Detail of Examination Content

DOMAIN I: MEDICAL MACHINE MAINTENANCE (24%)
A. Basic hydraulic and electronic circuitry
B. Purpose and operation of dialysis-related medical equipment
C. Purpose and use of test equipment and maintenance
D. Maintenance for medical equipment (e.g., water treatment equipment, dialysis equipment, testing equipment, and mechanical/electrical systems)
E. Maintenance of machines to complete all scheduled treatments

DOMAIN II: QUALITY ASSESSMENT AND PERFORMANCE IMPROVEMENT (QAPI) (7%)
A. QAPI principles related to biomed responsibilities
B. Alerts and recalls, or risk management investigations related to medical equipment

DOMAIN III: WATER TREATMENT SYSTEM MANAGEMENT (30%)
A. Procedures for the processing of water samples
B. AAMI analysis water samples
C. Regulatory requirements for water quality
D. Clinical manifestations for out-of-range test results
E. Cultures and endotoxins for water treatment system
F. Water system cleaning and disinfection requirements
G. Theory and test methods of water treatment component operation
H. Valve tags, component labels, directional tape, system schematic, valve legend
I. State regulatory requirements for alternate water treatment plan and update as needed
J. Requirement for secure water room

DOMAIN IV: CONCENTRATE SYSTEMS MANAGEMENT (11%)
A. Bicarb and acid
B. Principles for testing of specific gravity, conductivity, or pH
C. Knowledge of concentrate chemistry
D. Cultures and endotoxins of dialysate
E. Maintenance of concentrate equipment
F. Concentrate equipment cleaning and disinfection requirements
DOMAIN V: REPROCESSING OF DIALYZER (4%)
   A. Principles for reprocessing programs
   B. Reprocessing equipment (e.g., automated, manual)
   C. Water treatment systems for reprocessing equipment
   D. Physical plant requirements for a reprocessing program

DOMAIN VI: LIFE SAFETY EQUIPMENT AND PHYSICAL PLANT MAINTENANCE (9%)
   A. Requirements for life safety equipment
   B. Inspections on life safety equipment
   C. Vendors for repair of life safety equipment
   D. Routine inspections of physical plant as per quality requirements
   E. Vendors for repairs related to physical plant

DOMAIN VII: DOCUMENTATION PRACTICES (7%)
   A. Documentation of repair and maintenance (e.g., water treatment, medical equipment, physical plant)
   B. Documentation practices
   C. Review, audit, and trend logs

DOMAIN VIII: PROFESSIONAL RESPONSIBILITY (8%)
   A. Work-related vocabulary, symbols, abbreviations, etc.
   B. Confidentiality of patient and employee information
   C. Regulatory organizations (e.g., AAMI, CMS, OSHA)
   D. Maintenance of professional certification
   E. Support staff on technical issues related to medical equipment
   F. Types of and safe handling of medical waste
   G. Support staff in-service related to biomedical and clinical equipment
   H. Infection control procedures