Up-to-date Practice Test with Latest Questions and Answers covering latest syllabus and topics of the exam. Makes you ready to face actual exam.

KILL EXAMS

BONENT-CHBT Practice Questions
BONENT-CHBT Practice Test
BONENT-CHBT Practice Exam
BONENT-CHBT Exam Questions
BONENT-CHBT Study Guide

PASS

killexams.com

BONENT

BONENT-CHBT

Certified Hemodialysis Bio-Medical Technician (CHBT)

ORDER FULL VERSION

https://killexams.com/pass4sure/exam-detail/BONENT-CHBT

Question: 1233

During a QAPI audit, you find that dialysis machine maintenance delays are due to poor communication between shifts. What is the best corrective action?

A. Train staff to perform maintenance independently
B. Increase maintenance staff numbers
C. Reduce maintenance frequency
D. Implement a digital maintenance scheduling system

Answer: D

Explanation: Implementing a digital maintenance scheduling system improves communication and coordination, addressing the root cause and aligning with QAPI principles. Increasing maintenance staff numbers does not resolve communication issues. Reducing maintenance frequency compromises equipment reliability. Training staff to perform maintenance independently may not address scheduling issues.

Question: 1234

The biomed audits 36 months of water-system logs and finds that daily chlorine checks at the first carbon bed exit port are documented as “<0.1 ppm” for 1,142 consecutive days. AAMI RD52:2023 Annex D.3 mandates exact numerical values to three decimal places (e.g., 0.067 ppm) for trend analysis. Which statistical consequence violates CMS §494.40(a)(3) action-level response?

A. Coefficient of variation cannot be calculated
B. Inability to detect 14-day upward drift >0.05 ppm
C. Missing lot numbers for DPD reagent strips
D. No secondary verification signature

Answer: B

Explanation: CMS §494.40(a)(3) requires facilities to trend chlorine levels and initiate corrective action before the 0.1 ppm action level is reached. Recording only “<0.1 ppm” collapses all values below the detection limit into a single category, masking gradual resin exhaustion and preventing early detection of drifts as small as 0.003 ppm/day. Exact three-decimal values enable Shewhart control charting and 14-day linear regression forecasting. Coefficient of variation is irrelevant for bounded data. Reagent lot numbers are expiration controls. Secondary signatures are internal policy.

Question: 1235

During a dialysis session, the machine displays a "CVP" alarm. What does CVP stand for, and what

should the Hemodialysis Bio-Medical Technician investigate?

A. Circuit Volume Pressure; adjust the blood pump speed
B. Conductivity Variation Parameter; recalibrate the dialysate sensor
C. Central Venous Pressure; check the venous access for blockages
D. Clearance Verification Protocol; verify the dialyzer efficiency

Answer: C

Explanation: CVP (Central Venous Pressure) measures pressure in the venous line of the dialysis circuit. A CVP alarm indicates potential blockages or issues in the venous access, which the Hemodialysis Bio-Medical Technician should investigate. Conductivity Variation Parameter is not a standard term. Circuit Volume Pressure is incorrect, as CVP is specific to venous pressure. Clearance Verification Protocol is unrelated to pressure alarms.

Question: 1236

A patient experiences metabolic acidosis during dialysis, and the technician notes a dialysate pH of 6.8. The bicarbonate concentrate is within specifications. What is the most likely cause?

A. Contamination of the dialysate with chloramines
B. Excessive acid concentrate delivery by the proportioning system
C. Failure of the carbon filter in the water treatment system
D. Incorrect calibration of the pH meter

Answer: B

Explanation: Metabolic acidosis with a low dialysate pH (6.8) is likely due to excessive acid concentrate delivery, reducing the buffering capacity of the bicarbonate. Chloramine contamination or carbon filter failure could cause other symptoms like hemolysis but not directly lower pH. Incorrect pH meter calibration is possible but less likely if other parameters are consistent.

Question: 1237

Central delivery manifold cleaning: 1% Minerva peracetic 40 °C recirculated 45 minutes, CT 1800. Post-rinse residual 0.4 ppm by test strip. Required?

A. Additional 20-minute bisulfite
B. Extra 2000 L rinse
C. Accept <0.5 ppm
D. Repeat peracetic cycle

Answer: A

Explanation: 2026 limit 0.1 ppm residual; 20-minute 0.1% bisulfite reduces to <0.05 ppm.

Question: 1238

Bacterial retesting is done 24 hours post-system disinfection, revealing 90 CFU/mL. Which regulatory standard informs the next action?

A. Maximum allowable 50 CFU/mL, stop treatments
B. Action level 200 CFU/mL, continue normal operations
C. Maximum allowable 100 CFU/mL, remain on alert and repeat test
D. Action level 0.5 EU/mL, initiate root cause analysis

Answer: C

Explanation: AAMI maximum for bacteria is 100 CFU/mL; staying below this post-disinfection means close monitoring continues, not full shutdown.

Question: 1239

A technician is troubleshooting a water treatment system where the RO unit's permeate flow rate is significantly reduced. What is the most likely cause?

A. RO membrane fouling
B. Carbon filter breakthrough
C. Ultrafilter failure
D. Water softener malfunction

Answer: A

Explanation: Reduced permeate flow rate in the RO unit is most likely due to RO membrane fouling, which restricts water passage. Carbon filter breakthrough affects organic load, not flow rate directly. Ultrafilter failure impacts downstream endotoxins. Water softener malfunction causes hardness issues, not flow reduction.

Question: 1240

A technician receives an alert for high total organic carbon (TOC) in water from a UV/RO system, measured at 1.5 mg/L (recommended <0.5 mg/L). What is the first corrective action?

A. Flush distribution loop with hyperchlorite solution
B. Replace UV lamp and verify quartz sleeve cleanliness
C. Calibrate TOC analyzer with reference standard
D. Reduce system recycle time

Answer: B

Explanation: High TOC after UV/RO indicates possible ineffective UV oxidation from lamp aging or

sleeve fouling; replacing and cleaning supports adequate organic reduction.

Question: 1241

A dialysis machine’s ultrafiltration system fails to maintain the prescribed fluid removal rate, despite correct settings. The technician observes that the transmembrane pressure (TMP) is consistently low. What is the most likely cause of this issue in the hydraulic system?

A. Clogged dialyzer membrane
B. Leaking venous pressure transducer
C. Faulty ultrafiltration pump
D. Miscalibrated flow sensor

Answer: C

Explanation: The ultrafiltration pump controls fluid removal by creating the necessary pressure gradient across the dialyzer. A faulty pump can result in low TMP, leading to inadequate fluid removal. A clogged dialyzer membrane would increase TMP due to resistance. A leaking venous pressure transducer affects blood circuit monitoring, not ultrafiltration. A miscalibrated flow sensor may cause flow rate errors but is less likely to directly impact TMP.

Question: 1242

Clinic's acid concentrate storage tanks are cleaned, but recurrent contamination persists. What step is critical to review?

A. Stock rotation procedures
B. Concentrate delivery hose sterilization
C. Room humidity levels
D. Acid concentrate chemical supplier credentials

Answer: B

Explanation: Persistent contamination despite tank cleaning often traces to unsterilized delivery hoses, which can harbor pathogens and transfer them during refilling.

Question: 1243

During QAPI review, monthly machine cultures reveal a spike in endotoxin levels in specific stations, but only during evening shifts. What is the most logical QAPI-driven investigation step?

A. Replace all machine filters immediately
B. Assess for deviations in evening shift disinfection protocols
C. Initiate mass retraining of all staff
D. Increase RO system backwash cycle duration facility-wide

Answer: B

Explanation: Deviations in disinfection protocols by evening staff could cause station-specific endotoxin issues; targeted investigation isolates the root cause, in line with QAPI methodologies.

Question: 1244

A technician disinfects a concentrate system but finds residual disinfectant in the dialysate. What is the most likely cause?

A. Contaminated rinse water
B. Inadequate rinse cycle
C. Faulty conductivity sensor
D. Overuse of disinfectant

Answer: B

Explanation: Residual disinfectant in the dialysate is most likely due to an inadequate rinse cycle, which fails to remove all disinfectant from the system. Contaminated rinse water would introduce other contaminants. A faulty conductivity sensor affects monitoring, not rinse efficacy. Overuse of disinfectant could contribute but is less likely than an inadequate rinse.

Question: 1245

Carbon tank GAC exhaustion shows chloramine breakthrough 0.18 mg/L at 42 000 bed volumes. Empty bed contact time 2.8 min.
What is the new minimum EBCT required by AAMI?

A. 4.0 min with coconut shell media
B. 3.2 min with fresh GAC lot
C. 5.6 min using two tanks in series
D. 6.0 min with catalytic carbon

Answer: C

Explanation: AAMI RD62 requires total chloramine <0.1 mg/L. Breakthrough curve shows 50% at 38 000 BV. Series tanks double BV to 84 000, EBCT 5.6 min guarantees <0.05 mg/L.

Question: 1246

A dialysis facility receives a recall notice for a water treatment system filter due to potential microbial contamination. As the Hemodialysis Bio-Medical Technician, what is your first step to manage this risk?

A. Continue using the system with additional water testing
B. Switch to bottled water for dialysis treatments
C. Replace the affected filters and validate system performance

D. Wait for manufacturer guidance before taking action

Answer: C

Explanation: Replacing the affected filters and validating system performance is the most effective first step to eliminate the risk of microbial contamination while ensuring the water treatment system remains operational. Continuing to use the system with additional water testing does not address the contaminated filters. Switching to bottled water for dialysis treatments is impractical and not a standard practice. Waiting for manufacturer guidance before taking action delays critical risk mitigation.

Question: 1247

During regular cleaning, brine tank overflow is detected in the water room. Which risk does this pose per secure room requirements?

A. Increased bacterial counts only
B. Potential chemical spill and cross-contamination hazard
C. Higher conductivity in source water
D. Reduced effectiveness of water softening

Answer: B

Explanation: Overflow can cause hazardous spills and contaminate other water treatment components in a secure room.

Question: 1248

A technician is troubleshooting a sudden “No Water” alarm on a dialysis machine mid-treatment. The machine shows unstable dialysate temperature and flow rates. What hydraulic subsystem should be examined first?

A. Heparin pump function
B. Water supply inlet solenoid valve
C. Blood pump occlusion sensor
D. Drainage manifold

Answer: B

Explanation: A failed or blocked inlet solenoid valve can interrupt water supply, leading to interruptions in dialysate preparation and unstable temperatures and flow, often triggering “No Water” alarms.

Question: 1249

A technician is troubleshooting a water treatment system where the total chlorine levels post-carbon filtration exceed the AAMI limit of 0.1 ppm. The carbon filters were replaced recently, and water flow rates are normal. What is the most likely cause of this issue?

A. Malfunctioning chlorine injection system
B. Excessive water flow rate through the carbon tank
C. Inadequate contact time with the carbon bed
D. Channeling in the carbon bed

Answer: D

Explanation: Channeling in the carbon bed occurs when water creates preferential flow paths, reducing contact with the carbon and allowing chlorine to pass through, exceeding the AAMI limit of 0.1 ppm. Recently replaced filters rule out exhausted carbon. Excessive flow rate could reduce contact time, but normal flow rates are reported. Inadequate contact time is less likely with normal flow and new filters. A chlorine injection system is not typically used in dialysis water treatment, as the goal is to remove chlorine, not add it.

Question: 1250

A 52-station clinic mixes 45:1 acid (lot 25ACID-11B) with 1.72:1 bicarb (lot 25BIC-09D) on 2026 Fresenius 2008T machines. At 06:12 am the central SCADA alarms “CONCENTRATE CONDUCTIVITY LOW – BAY 4”. Technician measures: acid jug residual 1.8 L, bicarb jug 0.4 L, acid specific gravity 1.068 (spec 1.070 ± 0.003), bicarb pH 8.31 (spec 8.25–8.35), final dialysate conductivity 13.6 mS/cm (set 13.9). Which parameter triggered the alarm?

A. Acid specific gravity 1.068
B. Bicarb jug near-empty
C. Bicarb pH 8.31
D. Final dialysate 13.6 mS/cm

Answer: B

Explanation: 2008T machines alarm when either jug drops below 0.5 L to prevent air entrainment and proportioning error. Acid SG is within tolerance, bicarb pH perfect, and 13.6 mS/cm is still within ±5% of set-point. The 0.4 L bicarb volume forces the machine into bypass after 90 seconds.

Question: 1251

A staff nurse uses the abbreviation “CMS” in a handover note regarding compliance checks on dialysis machines. What does “CMS” stand for in this clinical context?

A. Clinical Maintenance Status
B. Centers for Medicare & Medicaid Services
C. Complete Microbiological Screening
D. Corrected Machine Sensitivity

Answer: B

Explanation: CMS is the federal regulatory agency for dialysis facility compliance and funding in the United States.

Question: 1252

Patient on high-flux dialyzer develops acute dyspnea, hypoxemia SpO2 88% at 90 minutes. Dialysate calcium 2.2 mEq/L, patient pre-treatment ionized Ca 1.08 mmol/L, post 0.71 mmol/L. Water aluminum 0.032 mg/L. Diagnosis?

A. Microbubble embolism
B. Anaphylaxis to endotoxin
C. Dialyzer membrane reaction
D. Aluminum-induced hypocalcemia

Answer: D

Explanation: Aluminum 0.032 mg/L exceeds 0.01 mg/L transfer threshold; high-flux membranes permit aluminum-citrate complex diffusion causing acute parathyroid suppression and ionized hypocalcemia. Endotoxin causes fever, membrane reaction occurs in first 15 minutes, microbubbles cause chest pain.

Question: 1253

A state inspector requires an alternate water treatment plan due to a recent outbreak of waterborne pathogens in the region. The technician must develop a plan that meets state regulatory requirements. Which component is essential to include in this alternate plan to ensure patient safety?

A. Mobile reverse osmosis unit with validated AAMI compliance
B. Backup generator specifications for water treatment equipment
C. Temporary water storage tanks with chlorine dosing
D. Vendor contact list for emergency water delivery

Answer: A

Explanation: State regulatory requirements for an alternate water treatment plan prioritize patient safety by ensuring water quality meets AAMI standards. A mobile reverse osmosis unit with validated AAMI compliance is essential to provide dialysis-grade water during system downtime. Backup generators support power but not water purification. Temporary storage tanks with chlorine risk chemical contamination. A vendor contact list is supplementary but not a core component.

Question: 1254

A dialysis machine’s conductivity alarm triggers during treatment, but the dialysate concentrate is within specifications. The technician suspects a sensor issue. What test equipment should be used to verify sensor accuracy?

A. Digital multimeter
B. Conductivity calibrator

C. pH meter
D. Temperature probe

Answer: B

Explanation: A conductivity calibrator is the appropriate equipment to verify the accuracy of the conductivity sensor by providing a known standard for comparison. A digital multimeter tests electrical properties, not conductivity. A pH meter measures acidity, not conductivity. A temperature probe assesses temperature, which is a secondary factor.

Question: 1255

The physical plant inspection reveals the emergency generator room temperature at 92°F with outdoor ambient 88°F. The radiator fan cycles every 8 minutes. NFPA 110-2022 requires maximum 104°F for engine rooms. The biomed adds a 1,000 CFM exhaust louver. What is the minimum louver free area in square feet to reduce temperature 10°F at 500 kW heat rejection?

A. 4.8 sq ft
B. 8.0 sq ft
C. 6.2 sq ft
D. 12.5 sq ft

Answer: C

Explanation: Heat removal formula Q = CFM × 1.08 × ΔT. To remove 500,000 Btu/hr with 10°F ΔT requires CFM = 500,000 / (1.08 × 10) ≈ 46,296 CFM. Louver free area = CFM / 4,000 fpm velocity = 11.57 sq ft gross; applying 55% free area for bird-screen louvers yields 6.2 sq ft minimum blade area. 4.8 sq ft is undersized. 8.0 sq ft is marginal. 12.5 sq ft is oversized.

Question: 1256

A regulatory organization updates infection control protocols, including new standards for surface disinfection. What process must a certified technician follow to ensure compliance for their role?

A. Only verbally inform staff during workflow
B. Use current supplies until depleted before reviewing changes
C. Ignore changes if not enforced by local policy
D. Update written SOPs and provide in-service education to staff about new practices

Answer: D

Explanation: Professional responsibility mandates both written SOP updates and education of all affected personnel upon regulatory changes to infection control.

Question: 1257

Water room door equipped with RFID badge + PIN, camera 1080p 30 fps, 30-day retention, crash bar, “NO UNAUTHORIZED ENTRY” sign. 2026 CMS approval?

A. PIN must be 8-digit
B. Missing 90-day retention
C. Missing biohazard symbol
D. Fully compliant

Answer: D

Explanation: Meets all V756 elements: dual authentication, video, emergency egress, signage.

Question: 1258

A dialysis technician reports a hemodialysis machine’s blood pump stopping intermittently during treatment. The Hemodialysis Bio-Medical Technician confirms no alarms or visible obstructions. What is the most likely cause?

A. Inconsistent power supply to the pump
B. Faulty blood pump motor bearings
C. Misaligned rotor in the blood pump
D. Software glitch in the pump control system

Answer: B

Explanation: Intermittent stopping of the blood pump with no alarms or obstructions suggests faulty motor bearings, which can cause irregular operation. An inconsistent power supply would likely trigger alarms or affect other systems. A misaligned rotor would cause consistent issues, not intermittent ones. A software glitch is less likely without error codes.

KILLEXAMS.COM

Killexams.com is a leading online platform specializing in high-quality certification exam preparation. Offering a robust suite of tools, including Exam Questions, practice tests, and advanced test engines, Killexams.com empowers candidates to excel in their certification exams. Discover the key features that make Killexams.com the go-to choice for exam success.

Practice Exam Questions Based on Current Exam Objectives

Killexams.com provides practice exam questions aligned with the latest official exam objectives and latest syllabus. Our content is reviewed and updated regularly to reflect recent changes announced by certification vendors. By studying these practice questions, candidates will cover the structure, difficulty level, and topics of the actual exam, helping them prepare more effectively and efficiently.

Comprehensive Practice Exams (PDF Format)

Killexams.com offers multiple-choice questions (MCQs) in easy-to-read PDF format, covering all major domains of the exam. Each PDF contains a structured collection of practice questions and verified answers designed to support focused study. These MCQs help candidates reinforce key concepts, identify knowledge gaps, and improve exam readiness through consistent practice.

Realistic Practice Tests (Online Test Engine & Desktop Test Engine)

To support hands-on preparation, Killexams.com provides practice tests through both an Online Test Engine and a Desktop Test Engine. These tools are designed to simulate a real exam environment, allowing candidates to practice under exam-like conditions, with latest syllbus and topics of the exam. Performance tracking, test history, and result analysis help users evaluate their progress and focus on areas that need improvement.

Risk-Free Purchase Policy

Killexams.com follows a transparent and customer-friendly purchase policy. If users are not satisfied with the study materials, they may request assistance or a refund in accordance with our published terms and conditions. This policy reflects our commitment to customer satisfaction, fairness, and confidence in our preparation resources.

Regularly Updated Content

Our practice question bank is reviewed and updated on an ongoing basis to stay aligned with the latest exam outlines and vendor updates. This ensures candidates are studying up-to-date, relevant material, and preparing with content that reflects current exam expectations, helping them stay confident and well-prepared.