



Certified EKG Technician (CET) Comprehensive Test Plan

Introduction

The eLightenment Solutions Certified EKG Technician (CET) Test Plan establishes a standardized framework for assessing competency in electrocardiographic practice. The examination is designed to ensure that all test items align with current cardiac monitoring standards, patient safety protocols, regulatory compliance requirements, and professional practice expectations applicable to ambulatory, outpatient, and clinical healthcare environments.

This test plan reflects the essential knowledge and technical skills required of EKG technicians, including accurate electrocardiogram acquisition, correct lead placement, rhythm recognition, equipment operation, patient preparation, and clinical documentation. The examination supports the role of the EKG technician in assisting licensed healthcare providers while maintaining compliance with ethical, legal, and professional standards.

Examination Overview

- **Total Scored Items:** 110
- **Exam Time:** 1.5 hours
- **Format:** Multiple-choice questions assessing knowledge-based and applied clinical tasks
- **Delivery:** Computer-based testing with randomized item selection
- **Purpose:** The Certified EKG Technician (CET) Certification Examination is designed to verify that candidates demonstrate the essential technical knowledge, electrocardiographic skills, and professional competencies required to safely and accurately perform EKG procedures and support cardiac monitoring functions in ambulatory, outpatient, and clinical healthcare settings.

Examination Domains & Weighting

Domain	Approximate Weighting	Question Selection
Cardiac Anatomy, Physiology & Conduction System	~13%	Randomized from Cardiac Anatomy, Physiology & Conduction System item bank
EKG Equipment, Lead Placement & Technical Skills	~14%	Randomized from EKG Equipment, Lead Placement & Technical Skills item bank
ECG Waveforms, Intervals & Basic Interpretation	~7%	Randomized from ECG Waveforms, Intervals & Basic Interpretation item bank

Dysrhythmias, Pacemakers & Emergencies	~14%	Randomized from Dysrhythmias, Pacemakers & Emergencies item bank
Stress Testing, Holter/Telemetry & Patient Care/Professionalism	~9%	Randomized from Stress Testing, Holter/Telemetry & Patient Care/Professionalism item bank
Total	100%	

Domain 1: Cardiac Anatomy, Physiology & Conduction System (~13%)

- Heart chambers, valves, great vessels
- Coronary circulation
- Electrical conduction pathway (SA node, AV node, bundle branches, Purkinje fibers)
- Intrinsic rates of pacemaker sites
- Relationship between electrical and mechanical activity (depolarization vs contraction)

Domain 2: EKG Equipment, Lead Placement & Technical Skills (~23%)

- ECG machine settings (paper speed, gain, calibration)
- Types of leads (limb, augmented, precordial, telemetry)
- Standard 12-lead placement, variations for special populations (pediatric, bariatric, mastectomy, dextrocardia, amputations, implants, burns, pregnancy, COPD)
- Skin preparation, electrode application, infection control
- Artifact recognition & correction (wandering baseline, somatic tremor, AC interference, interrupted baseline)
- Documentation of non-standard placements

Domain 3: ECG Waveforms, Intervals & Basic Interpretation (~30%)

- P wave, QRS complex, T wave, U wave: what they represent
- PR, QRS, QT intervals and normal ranges
- ST segment morphology (elevation, depression, isoelectric)
- Axis basics, low-voltage QRS, chamber & ischemic changes (injury, infarction patterns)
- Rate calculation methods (300/150/100, six-second method, sequence method)
- Normal sinus rhythm, sinus bradycardia, sinus tachycardia, sinus arrhythmia

Domain 4: Dysrhythmias, Pacemakers & Emergencies (~20%)

- Atrial rhythms: PACs, atrial flutter, atrial fibrillation, MAT, SVT
- Junctional rhythms & PJCs
- Ventricular rhythms: PVCs, couples, bigeminy, VT, VF, torsades de pointes, ventricular standstill, asystole
- AV blocks: 1st-degree, 2nd-degree Type I & II, 3rd-degree (complete heart block)
- Pacemaker rhythms: atrial-paced, ventricular-paced, AV-paced
- Pacemaker malfunctions (failure to capture, failure to sense, failure to pace)
- Recognition of life-threatening rhythms and need for emergent response/defibrillation.

Domain 5: Stress Testing, Holter/Telemetry & Patient Care/Professionalism (~13%)

- Indications, contraindications & patient preparation for exercise and pharmacologic stress tests
- Role of the EKG tech during stress testing (monitoring, BP checks, stopping criteria, symptom reporting)
- Holter monitor & event monitor setup, patient teaching, activity/symptom diary
- Continuous telemetry monitoring: electrode placement, alarm awareness, basic rhythm recognition
- Patient identification, consent, communication (anxious, confused, HOH patients)
- Safety, infection control, HIPAA/confidentiality, documentation of symptoms and events

Core Knowledge (Applied Across All Domains)

- Patient Safety & Infection Control
- Professionalism, Ethics & Confidentiality
- Patient Identification, Preparation & Communication
- Clinical Accuracy & Attention to Detail
- Regulatory Awareness & Scope of Practice

Professional Notes

Examinations are computer-based and randomized, ensuring no two exams are identical. The randomization process maintains domain coverage balance, even though the exact question count may vary. Pretest items may appear but are not scored. They are used to validate future exam questions.

Candidates are encouraged to prepare across all content domains, as each exam version provides a comprehensive assessment of phlebotomy practice.

Alignment with eLightenment Solutions' Mission

This test plan has been developed and updated to reflect current clinical best practices, patient safety standards, and regulatory compliance requirements, and aligns with eLightenment Solutions' mission:

“Empowering Communities Through Education, Training, and Support.”