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CERTIFICATION

ACSM Certified Personal Trainer[®]

Exam Content Outline

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ACSM Certified Personal Trainer®

Exam Content Outline

A job task analysis study was completed in 2017 to describe the job functions of an ACSM Certified Personal Trainer® (ACSM-CPT®). The job task analysis serves as the foundation for the ACSM-CPT® exam blueprint (also known as an exam content outline) which assesses the practice-related knowledge of professionals seeking certification as a requirement of the job as a personal trainer. It is important to note that all ACSM-CPT® examination questions are based on the exam content outline.

Job Definition

The ACSM Certified Personal Trainer (ACSM-CPT®), possessing a high school diploma or GED at minimum, works primarily with apparently healthy individuals to enhance fitness. The ACSM-CPT® also works with individuals who have stable health challenges and are cleared to exercise independently. The ACSM-CPT® conducts basic preparticipation health screenings, lifestyle inventories, and fitness assessments for health and skill-related components of fitness. The ACSM-CPT® assesses behavior adaptation readiness and offers guidance in the development of realistic, client-centered goals related to health, fitness and wellness. The ACSM-CPT® develops and administers programs designed to promote optimal cardiorespiratory fitness, muscular strength, muscular endurance, flexibility, and body composition, as well as agility, balance, coordination, power, speed, and reaction time. The ACSM-CPT® facilitates client motivation and adherence and honors client confidentiality. The ACSM-CPT® adheres to all agreed-upon terms with each client and stays within the scope of practice of the ACSM-CPT® credential. The prudent ACSM-CPT® makes referrals to appropriate allied health professionals when clients' needs exceed the ACSM-CPT's scope of practice.

Overview

The ACSM-CPT® exam has a seat time of 165 minutes and consists of 150 items; of which 120 items are scored and 30 are non-scored. The percentages listed in Table 1 indicate the proportion of questions representing each performance domain.

Table 1. 2017 ACSM-CPT® Performance Domains

Performance Domains (2017)	
Domain I: Initial Client Consultation and Assessment	25%
Domain II: Exercise Programming and Implementation	45%
Domain III: Exercise Leadership & Client Education	20%
Domain IV: Legal & Professional Responsibilities	10%
Total	100%

Before an item can be used on an exam, it is subjected to Credentialing Committee review and pre-testing. Pre-testing allows the test developers to gather statistical information about new items for evaluation purposes without affecting candidate scores. Statistical information gathered from pre-test items is analyzed to determine if the items function properly and are ready for use as scored items. Pre-test items are randomly interspersed throughout the exam and indistinguishable from scored items. You should treat each item as if it will be scored.

Cognitive Level

The job of a personal trainer can range between simple and complicated tasks. Much in the same way, the ACSM-CPT® exam items are written at different levels of cognitive complexity. Cognitive complexity is a way of describing the extent to which a candidate should know or be able to perform a task. A low level of cognitive processing is simple recall of information whereas a higher level of cognitive processing includes analysis, evaluations, and judgments. ACSM uses three levels of cognitive challenge: recall, application, and synthesis.

Recall = remember basic facts, information, or steps in a process.

Example:

When should a personal trainer administer a PAR-Q+ to a client?

- A. before the fitness evaluation
- B. following the first exercise session
- C. during the physician's medical examination
- D. after creating an exercise prescription

Application = comprehend and implement processes, interpret simple results, or summarize information.

Example question:

A personal trainer is conducting a 12-min walk test. Approximately 10 minutes into the test, the client reports that they are starting to discomfort in their chest. The client indicates that they would like to continue. Which of the following is the most appropriate recommendation?

- A. Reduce the walking speed.
- B. Decrease the stride length.
- C. Minimize arm movements.
- D. Suspend the test.

Synthesis = differentiate, relate parts of a system, make judgments on new information based on given criteria, critique a process or product, make recommendations.

Example:

During the preparticipation screening, a client presents with the following information:

- Physical activity: jogs 2-3 times per week at 70% of HRR for 20 minutes
- Current medication: high blood pressure medication
- Health history:
 - A physical examination was conducted 10 months ago.
 - Family physician cleared the client to exercise at that time.
- Goal: Participate in a marathon for the first time in six months.

The client would like to begin an exercise program right away. Which of the following is the most appropriate to perform next?

- A. Discontinue the screening and request a current exercise clearance.
- B. Select and administer an aerobic endurance test when the client is ready.
- C. Start the client on a moderate intensity aerobic exercise program 5-6 times/week.
- D. Begin the client on a vigorous intensity aerobic exercise program 3-4 times/week.

Example keys

Recall: A

Application: D

Analysis: B

Job Tasks

Each performance domain is divided into job tasks. Within each task is a list of statements that describe what a personal trainer should know and/or be able to perform as part of their job. Table 2 should provide candidates with a sense of the breadth and depth of information that will be covered on the ACSM-CPT® exam.

Table 2. Job tasks and related knowledge and skill statements

Task Name	Cognitive Level
I. Initial Client Consultation and Assessment	
A. Provide documents and clear instructions to the client in preparation for the initial interview.	Recall
1) Knowledge of: <ul style="list-style-type: none">a) the components of and preparation for the initial client consultation.b) the necessary paperwork to be completed by the client prior to the initial client interview.	
2) Skill in: <ul style="list-style-type: none">a) effective communication.b) utilizing multimedia resources (e.g., email, phone, text messaging).	
B. Interview the client to gather and provide pertinent information prior to fitness testing and program design.	Application
1) Knowledge of: <ul style="list-style-type: none">a) the components and limitations of a health/medical history, preparticipation screening, informed consent, trainer-client contract, and organizational policies and procedures.b) the use of medical clearance for exercise testing and program participation.c) health behavior modification theories and strategies.d) orientation procedures, including equipment utilization and facility layout.	
2) Skill in: <ul style="list-style-type: none">a) obtaining a health/medical history, medical clearance, and informed consent.	

C. Review and analyze client data to identify risk, formulate a plan of action, and conduct physical assessments.

Synthesis

- 1) Knowledge of:
 - a) risk factors for cardiovascular disease.
 - b) signs and symptoms of chronic cardiovascular, metabolic, and/or pulmonary disease.
 - c) the process for determining the need for medical clearance prior to participation in fitness testing and exercise programs.
 - d) relative and absolute contraindications to exercise testing.
 - 2) Skill in:
 - a) identifying modifiable risk factors for cardiovascular disease and teaching clients about risk reduction.
 - b) determining appropriate fitness assessments based on the initial client consultation.
 - c) following protocols during fitness assessment administration.
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D. Evaluate behavioral readiness and develop strategies to optimize exercise adherence.

Application

- 1) Knowledge of:
 - a) behavioral strategies to enhance exercise and health behavior change (e.g., reinforcement, S.M.A.R.T. goal setting, social support).
 - b) health behavior change models (e.g., socioeconomic model, readiness to change model, social cognitive theory, theory of planned behavior) and effective strategies that support and facilitate behavioral change.
 - 2) Skill in:
 - a) setting effective client-oriented S.M.A.R.T. behavioral goals.
 - b) choosing and applying appropriate health behavior modification strategies based on the client's skills, knowledge and level of motivation.
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E. Assess the components of health- and/or skill-related physical fitness to establish baseline values, set goals, and develop individualized programs.

Synthesis

- 1) Knowledge of:
 - a) the basic structures of bone, skeletal muscle, and connective tissue.
 - b) the basic anatomy of the cardiovascular and respiratory systems.
 - c) the definition of the following terms: anterior, posterior, proximal, distal, inferior, superior, medial, lateral, supination, pronation, flexion, extension, adduction, abduction, hyperextension, rotation, circumduction, agonist, antagonist, and stabilizer.

- d) the sagittal, frontal (coronal), transverse (horizontal) planes of the body and plane in which each muscle action occurs.
- e) the interrelationships among center of gravity, base of support, balance, stability, and proper spinal alignment.
- f) the following curvatures of the spine: lordosis, scoliosis, and kyphosis.
- g) the differences between the aerobic and anaerobic energy systems and the effects of acute and chronic exercise on each.
- h) acute responses to cardiorespiratory exercise and resistance training.
- i) chronic physiological adaptations associated with cardiovascular exercise and resistance training.
- j) physiological responses related to warm-up and cool-down.
- k) physiological basis of acute muscle fatigue, delayed onset muscle soreness (DOMS), and musculoskeletal injury/overtraining.
- l) physiological adaptations that occur at rest and during submaximal and maximal exercise following chronic aerobic and anaerobic exercise training.
- m) physiological basis for improvements in muscular strength and endurance.
- n) expected blood pressure responses associated with postural changes, acute physical exercise, and adaptations as a result of long-term exercise training.
- o) types of muscle contraction, such as isotonic (concentric, eccentric), isometric (static), and isokinetic.
- p) major muscle groups (e.g., trapezius, pectoralis major, latissimus dorsi, deltoids, biceps, triceps, rectus abdominis, internal and external obliques, erector spinae, gluteus maximus, hip flexors, quadriceps, hamstrings, hip adductors, hip abductors, anterior tibialis, soleus, gastrocnemius).
- q) major bones (e.g., clavicle, scapula, sternum, humerus, carpals, ulna, radius, femur, fibula, tibia, tarsals).
- r) joint classifications (e.g., hinge, ball and socket).
- s) the primary action and joint range of motion specific to each major muscle group.
- t) the following terms related to muscles: hypertrophy, atrophy, and hyperplasia.
- u) physiological basis of the components of health-related physical fitness (cardiovascular fitness, muscular strength, muscular endurance, flexibility, and body composition).
- v) normal chronic physiologic adaptations associated with cardiovascular, resistance, and flexibility training.
- w) test termination criteria, and proper procedures to be followed after discontinuing an exercise test.

- x) anthropometric measurements and body composition techniques (e.g., skinfolds, plethysmography, bioelectrical impedance, infrared, dual-energy x-ray absorptiometry (DEXA), body mass index (BMI), circumference measurements).
- y) fitness testing protocols, including pre-test preparation and assessments of cardiovascular fitness, muscular strength, muscular endurance, flexibility, and body composition.
- z) interpretation of fitness test results.
- aa) the recommended order of fitness assessments.
- bb) appropriate documentation of signs or symptoms during an exercise session.
- cc) various mechanisms for appropriate referral to a physician.

2) Skill in:

- a) locating/palpating pulse landmarks, accurately measuring heart rate, and obtaining rating of perceived exertion (RPE).
- b) selecting and administering cardiovascular fitness assessments.
- c) locating anatomical sites for circumference (girth) and skinfold measurements.
- d) selecting and administering muscular strength and muscular endurance assessments.
- e) selecting and administering flexibility assessments for various muscle groups.
- f) recognizing postural deviations that may affect exercise performance and body alignment.
- g) delivering test and assessment results in a positive manner.

F. Develop a plan and timeline for reassessing physical fitness, goals, and related behaviors.

Application

1) Knowledge of:

- a) developing fitness plans based on the information obtained in the client interview and the results of the physical fitness assessments.
- b) alternative health behavior modification strategies.
- c) the purpose and timeline for reassessing each component of physical fitness (cardiovascular fitness, muscular strength, muscular endurance, flexibility, and body composition).

II. Exercise Programming and Implementation

A. Review the client's goals, medical history, and assessment results and determine exercise prescription.

Recall

- 1) Knowledge of:
 - a) the risks and benefits associated with guidelines for exercise training and programming for healthy adults, older adults, children, adolescents, and pregnant women.
 - b) the risks and benefits associated with guidelines for exercise training and programming for clients with chronic disease who are medically cleared to exercise.
 - c) Health-related conditions that require consultations with medical personnel prior to initiating physical activity.
 - d) components of health-related physical fitness (cardiovascular fitness, muscular strength, muscular endurance, flexibility, and body composition).
 - e) program development for specific client needs (e.g., sport-specific training, performance, lifestyle, functional, balance, agility, aerobic and anaerobic).
 - f) special precautions and modifications of exercise programming for participation in various environmental conditions (e.g., altitude, variable ambient temperatures, humidity, environmental pollution).
 - g) documenting exercise sessions and performing periodic re-evaluations to assess changes in fitness status.
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B. Select exercise modalities to achieve the desired adaptations based on the client's goals, medical history, and assessment results.

Application

- 1) Knowledge of:
 - a) selecting exercises and training modalities based on client's age, functional capacity, and exercise test results.
 - b) the principles of specificity and program progression.
 - c) the advantages, disadvantages, and applications of interval, continuous, and circuit training programs for cardiovascular fitness improvements.
 - d) activities of daily living (ADLs) and their role in the overall health and fitness of the client.
 - e) differences between physical activity recommendations and training principles for general health benefits, weight management, fitness improvements, and athletic performance enhancement.
 - f) advanced resistance training programming (e.g., super sets, Olympic lifting, plyometric exercises, pyramid training).
 - g) the six motor skill-related physical fitness components; agility, balance, coordination, reaction time, speed and power.

- h) the benefits, risks, and contraindications for a wide variety of resistance training exercises specific to individual muscle groups (e.g., for rectus abdominis, performing crunches, supine leg raises, and plank exercises).
 - i) the benefits, risks, and contraindications for a wide variety of range of motion exercises (e.g., dynamic and passive stretching, Tai Chi, Pilates, yoga, proprioceptive neuromuscular facilitation, partner stretching)
 - j) the benefits, risks, and contraindications for a wide variety of cardiovascular training exercises and applications based on client experience, skill level, current fitness level and goals (e.g., walking, jogging, running).
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C. Determine initial Frequency, Intensity, Time, Type, Volume and Progression (i.e., FITT-VP Principle) of exercise based on the client's goals, medical history, and assessment results.

Application

- 1) Knowledge of:
 - a) the recommended FITT-VP principle for physical activity for cardiovascular and musculoskeletal fitness in healthy adults, older adults, children, adolescents, and pregnant women.
 - b) the recommended FITT-VP principle for development of cardiovascular and musculoskeletal fitness in clients with stable chronic diseases who are medically cleared for exercise.
 - c) exercise modifications for those with physical and intellectual limitations (e.g., injury rehabilitation, neuromuscular and postural limitations).
 - d) implementation of the components of an exercise training session (e.g., warm-up, conditioning, cool down, stretching).
 - e) application of biomechanics and exercises associated with movements of the major muscle groups (i.e., seated knee extension: quadriceps).
 - f) establishing and monitoring levels of exercise intensity, including heart rate, RPE, pace, maximum oxygen consumption and/or metabolic equivalents (METs).
 - g) determining target/training heart rates using predicted maximum heart rate and the heart rate reserve method (Karvonen formula) with recommended intensity percentages based on client fitness level, medical considerations, and goals.
 - h) periodization for cardiovascular, resistance training, and conditioning program design and progression of exercises.
 - i) repetitions, sets, load, and rest periods necessary for desired goals.
 - j) using results from repetition maximum tests to determine resistance training loads.
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D. Review the proposed program with the client, demonstrate exercises, and teach the client how to perform each exercise.

Application

- 1) Knowledge of:
 - a) adaptations to strength, functional capacity, and motor skills.
 - b) the physiological effects of the Valsalva Maneuver and the associated risks.
 - c) the biomechanical principles for the performance of common physical activities (e.g., walking, running, swimming, cycling, resistance training, yoga, Pilates, functional training).
 - d) the concept of detraining or reversibility of conditioning and effects on fitness and functional performance.
 - e) signs and symptoms of over-reaching/overtraining.
 - f) modifying exercise form and/or technique to reduce musculoskeletal injury.
 - g) exercise attire for specific activities, environments, and conditions (e.g., footwear, layering for cold, light colors in heat).
 - h) communication techniques for effective teaching with awareness of visual, auditory, and kinesthetic learning styles.
 - 2) Skill in:
 - a) demonstrating exercises designed to enhance cardiovascular endurance, muscular strength and endurance, balance, and range of motion.
 - b) demonstrating exercises for improving range of motion of major joints.
 - c) demonstrating a wide range of resistance training modalities and activities (e.g., variable resistance devices, dynamic constant external resistance devices, kettlebells, static resistance devices).
 - d) demonstrating a wide variety of functional training exercises (e.g., stability balls, balance boards, resistance bands, medicine balls, foam rollers).
 - e) proper spotting positions and techniques for injury prevention and exercise assistance.
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E. Monitor the client's technique and response to exercise, providing modifications as necessary.

Synthesis

- 1) Knowledge of:
 - a) normal and abnormal responses to exercise and criteria for termination of exercise (e.g., shortness of breath, joint pain, dizziness, abnormal heart rate response).
 - b) proper and improper form and technique while using cardiovascular conditioning equipment (e.g., stair-climbers, stationary cycles, treadmills, elliptical trainers).
 - c) proper and improper form and technique while performing resistance exercises (e.g., resistance machines, stability balls, free weights, resistance bands, calisthenics/body weight).
 - d) proper and improper form and technique while performing flexibility exercises (e.g., static stretching, dynamic stretching, partner stretching).

2) Skill in:

- a) interpreting client comprehension and body language during exercise.
- b) effective communication, including active listening, cuing, and providing constructive feedback during and after exercise.

F. Recommend exercise progressions to improve or maintain the client's fitness level.

Synthesis

1) Knowledge of:

- a) exercises and program modifications for healthy adults, older adults, children, adolescents, and pregnant women.
- b) exercises and program modifications for clients with chronic disease who are medically cleared to exercise (e.g., stable coronary artery disease, other cardiovascular diseases, diabetes mellitus, obesity, metabolic syndrome, hypertension, arthritis, chronic back pain, osteoporosis, chronic pulmonary disease, chronic pain).
- c) principles of progressive overload, specificity, and program progression.
- d) progression of exercises for major muscle groups (e.g., standing lunge to walking lunge to walking lunge with resistance).
- e) modifications to periodized conditioning programs to increase or maintain muscular strength and/or endurance, hypertrophy, power, cardiovascular endurance, balance, and range of motion/flexibility.

G. Obtain client feedback to ensure exercise program satisfaction and adherence.

Recall

1) Knowledge of:

- a) effective techniques for program evaluation and client satisfaction (e.g., survey, written follow-up, verbal feedback).
- b) client goals and appropriate review and modification.

III. Exercise Leadership and Client Education

A. Optimize participant adherence by using effective communication, motivational techniques, and behavioral strategies.

Synthesis

1) Knowledge of:

- a) verbal and nonverbal behaviors that communicate positive reinforcement and encouragement (e.g., eye contact, targeted praise, empathy).
- b) learning preferences (auditory, visual, kinesthetic) and how to apply teaching and training techniques to optimize training session.
- c) applying health behavior change models (e.g., socioecological model, readiness to change model, social cognitive theory, theory of planned behavior) and strategies that support and facilitate adherence.

- d) barriers to exercise adherence and compliance (e.g., time management, injury, fear, lack of knowledge, weather).
- e) techniques to facilitate intrinsic and extrinsic motivation (e.g., goal setting, incentive programs, achievement recognition, social support).
- f) strategies to increase non-structured physical activity (e.g., stair walking, parking farther away, biking to work).
- g) health coaching principles and lifestyle management techniques related to behavior change.
- h) leadership techniques and educational methods to increase client engagement.

2) Skill in:

- a) applying active listening techniques.
- b) using feedback to optimize a client's training sessions.
- c) effective and timely uses of a variety of communication modes (e.g., telephone, newsletters, email, social media).

B. Educate clients using scientifically sound resources.

Application

1) Knowledge of:

- a) influential lifestyle factors, including nutrition and physical activity habits.
- b) the value of carbohydrates, fats, and proteins as fuels for exercise and physical activity.
- c) the following terms: body composition, body mass index, lean body mass, anorexia nervosa, bulimia nervosa, and body fat distribution.
- d) the relationship between body composition and health.
- e) the effectiveness of diet, exercise and behavior modification as a method for modifying body composition.
- f) the importance of maintaining hydration before, during and after exercise.
- g) Dietary Guidelines for Americans.
- h) the Female Athlete Triad.
- i) the myths and consequences associated with various weight loss methods (e.g., fad diets, dietary supplements, over-exercising, starvation diets).
- j) the number of kilocalories in one gram of carbohydrate, fat, protein and alcohol.
- k) industry guidelines for caloric intake for individuals desiring to lose or gain weight.
- l) accessing and disseminating scientifically-based, relevant, fitness- and wellness-related resources and information.
- m) community-based exercise programs that provide social support and structured activities (e.g., walking clubs, intramural sports, golf leagues, cycling clubs).
- n) stress management and relaxation techniques (e.g., progressive relaxation, guided imagery, massage therapy).

IV. Legal and Professional Responsibilities

A. Collaborate with health care professionals and organizations to create a network of providers who can assist in maximizing the benefits and minimizing the risk of an exercise program.

Application

- 1) Knowledge of:
 - a) reputable professional resources and referral sources to ensure client safety and program effectiveness.
 - b) the scope of practice for the Certified Personal Trainer and the need to practice within this scope.
 - c) effective and professional communication with allied health and fitness professionals.
 - d) identifying individuals requiring referral to a physician or allied health services (e.g., physical therapy, dietary counseling, stress management, weight management, psychological and social services).

B. Develop a comprehensive risk management program (including an emergency action plan and injury prevention program) consistent with industry standards of care.

Application

- 1) Knowledge of:
 - a) resources available to obtain basic life support, automated external defibrillator (AED), and cardiopulmonary resuscitation certification.
 - b) emergency procedures (i.e., telephone procedures, written emergency procedures, personnel responsibilities) in a health and fitness setting.
 - c) precautions taken to ensure participant safety (e.g., equipment placement, facility cleanliness, floor surface).
 - d) the following terms related to musculoskeletal injuries (e.g., shin splints, sprain, strain, bursitis, fractures, tendonitis, patellofemoral pain syndrome, low back pain, plantar fasciitis).
 - e) contraindicated exercises/postures and risks associated with certain exercises (e.g., straight-leg sit-ups, double leg raises, full squats, hurdler's stretch, cervical and lumbar hyperextension, standing bent-over toe touch).
 - f) the responsibilities, limitations, and legal implications for the Certified Personal Trainer of carrying out emergency procedures.
 - g) potential musculoskeletal injuries (e.g., contusions, sprains, strains, fractures), cardiovascular/pulmonary complications (e.g., chest pain, palpitations/arrhythmias, tachycardia, bradycardia, hypotension/hypertension, hyperventilation), and metabolic abnormalities (e.g., fainting/syncope, hypoglycemia/hyperglycemia, hypothermia/hyperthermia).

- h) the initial management and basic first-aid procedures for exercise-related injuries (e.g., bleeding, strains/sprains, fractures, shortness of breath, palpitations, hypoglycemia, allergic reactions, fainting/syncope).
- i) the need for and components of an equipment service plan/agreement.
- j) the need for and use of safety policies and procedures (e.g., incident/accident reports, emergency procedure training) and legal necessity thereof.
- k) the need for and components of an emergency action plan.
- l) effective communication skills and the ability to inform staff and clients of emergency policies and procedures.

2) Skill in:

- a) demonstrating and carrying out emergency procedures during exercise testing and/or training.
- b) assisting, spotting, and monitoring clients safely and effectively during exercise testing and/or training.

C. Adhere to ACSM Certification's Code of Ethics by practicing in a professional manner within the scope of practice of an ACSM Certified Personal Trainer.

Recall

1) Knowledge of:

- a) the components of both the ACSM Code of Ethics as well as the ACSM Certified Personal Trainer scope of practice.
- b) appropriate work attire and professional behavior.

2) Skill in:

- a) conducting all professional activities within the scope of practice of the ACSM Certified Personal Trainer.

D. Follow industry-accepted professional, ethical, and business standards.

Recall

1) Knowledge of:

- a) professional liability and potential for negligence in training environments.
- b) legal issues for licensed and non-licensed healthcare professionals providing services, exercise testing and risk-management strategies.
- c) equipment maintenance to decrease risk of injury and liability (e.g., maintenance plan, service schedule, safety considerations).

E. Respect copyright laws by obtaining permission before using protected materials and any form of applicable intellectual property.

Recall

- 1) Knowledge of:
 - a) national and international copyright laws.
 - 2) Skill in:
 - a) referencing non-original work.
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F. Safeguard client confidentiality and privacy rights unless formally waived or in emergency situations.

Recall

- 1) Knowledge of:
 - a) practices/systems for maintaining client confidentiality.
 - b) the importance of client privacy (i.e., client personal safety, legal liability, client credit protection, client medical disclosure).
 - c) the Family Educational Rights and Privacy Act (FERPA), and the Health Insurance Portability and Accountability Act (HIPAA) laws.
- 2) Skill in:
 - a) rapidly accessing client emergency contact information.



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