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38	A	B	C	D	E
39	A	B	C	D	E

PRACTICE QUESTIONS

National Council On Strength And Fitness (NCSF)

CPT

Certified Personal Trainer

EDITION

Demo

QUESTIONS

9

ISSUED

September 3, 2026

Before you begin

What this is

9 practice questions for National Council On Strength And Fitness (NCSF) CPT , each with its answer key and an explanation. Answer a question before you read its key — the explanation is worth more once you have committed.

If something looks wrong

Send us three things and we will check it:

- the exam code, CPT
- the question number
- the email address on your order

Write to **support@mometrix.net**. We reply within one business day.

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QUESTION 1

MULTIPLE CHOICE

During a squat, which muscle groups act as the primary agonists (prime movers) responsible for knee extension and hip extension, respectively? (Choose two.)

- ☒ **A** Quadriceps femoris for knee extension
- ☐ **B** Biceps femoris for hip extension
- ☒ **C** Gluteus maximus for hip extension
- ☐ **D** Tibialis anterior for knee extension
- ☐ **E** Gastrocnemius for hip extension

ANSWER A - C

WHY The quadriceps femoris is the primary agonist for knee extension, and the gluteus maximus is the primary agonist for hip extension during a squat. The biceps femoris and gastrocnemius are not primary hip extensors in this movement, and the tibialis anterior performs dorsiflexion, not knee extension.

QUESTION 2

MULTIPLE CHOICE

Which of the following are documented chronic cardiovascular adaptations resulting from consistent aerobic training? (Choose two.)

- ☒ **A** Decreased resting heart rate due to increased vagal tone and stroke volume
- ☐ **B** Increased resting heart rate from enhanced sympathetic drive
- ☒ **C** Increased capillary density within skeletal muscle
- ☐ **D** Reduced left ventricular wall thickness and chamber volume
- ☐ **E** Decreased maximal cardiac output at a given submaximal workload

ANSWER A - C

WHY Chronic aerobic training typically lowers resting heart rate through enhanced parasympathetic (vagal) tone and increased stroke volume, and increases skeletal muscle capillary density, improving oxygen delivery. Increased resting heart rate, reduced left ventricular mass, and decreased maximal cardiac output are not expected adaptations of aerobic conditioning.

QUESTION 3 SINGLE CHOICE

Which joint classification allows the greatest range of motion and is exemplified by the shoulder (glenohumeral) and hip joints?

- ☐ A Hinge joint
- ☐ B Pivot joint
- ☒ C Ball-and-socket joint
- ☐ D Gliding (plane) joint

ANSWER C

WHY Ball-and-socket joints are triaxial and permit movement in all three planes (flexion/extension, abduction/adduction, rotation), giving them the greatest range of motion. The glenohumeral and hip joints are classic examples. Hinge joints move in one plane, pivot joints rotate, and gliding joints allow only short sliding motions.

QUESTION 4 SINGLE CHOICE

Which energy system is the predominant source of ATP regeneration during a high-intensity effort lasting approximately 60 seconds, such as a 400-meter sprint?

- ☐ A ATP-PCr (phosphagen) system
- ☒ B Anaerobic glycolysis
- ☐ C Aerobic oxidative phosphorylation
- ☐ D Krebs cycle alone

ANSWER B

WHY Anaerobic glycolysis becomes the dominant ATP source for maximal efforts lasting roughly 30 seconds to about 2 minutes, including a 400-meter sprint. The ATP-PCr system dominates the first ~10 seconds, while oxidative phosphorylation contributes more substantially to efforts lasting several minutes or longer.

QUESTION 5 SINGLE CHOICE

A client completes a submaximal treadmill test using the Bruce protocol and achieves a maximal predicted heart rate equivalent workload. Which of the following best describes the purpose of this test in a healthy, apparently asymptomatic adult?

- ☐ A To diagnose coronary artery disease
- ☒ B To estimate aerobic capacity (VO₂max) and assess cardiovascular fitness
- ☐ C To determine resting metabolic rate for weight-loss programming
- ☐ D To measure anaerobic threshold exclusively

ANSWER B

WHY Submaximal treadmill tests such as the Bruce protocol are used by personal trainers to estimate aerobic capacity (VO₂max) and gauge cardiovascular fitness in apparently healthy adults. They are not diagnostic tools for coronary artery disease, do not measure resting metabolic rate, and are not designed to isolate anaerobic threshold.

QUESTION 6 SINGLE CHOICE

For a previously sedentary adult beginning a resistance training program, which repetition and set scheme best aligns with established guidelines for initial musculoskeletal conditioning?

- ☐ A 1 to 4 reps of 1 to 2 sets at 80% to 95% of 1RM
- ☒ B 8 to 12 reps of 1 to 3 sets at moderate loads allowing proper form
- ☐ C 15 to 20 reps of 4 to 5 sets at maximal effort
- ☐ D 3 to 5 reps of 5 to 6 sets to failure on every set

ANSWER B

WHY For beginners, established resistance-training guidelines recommend 1 to 3 sets of 8 to 12 repetitions at a moderate load that allows proper technique, progressively increasing over time. Very low-rep/high-load work, high-volume training to failure, and maximal-effort protocols are inappropriate for an initial conditioning phase.

QUESTION 7 SINGLE CHOICE

When instructing a client in the standard dumbbell bench press, which cue best supports shoulder safety and proper scapular mechanics?

- ☐ A Elevate and protracted scapulae throughout the lift
- ☒ B Retract and depress the scapulae and maintain them on the bench
- ☐ C Keep the elbows flared at 90 degrees from the torso throughout the press
- ☐ D Lift the head and upper thoracic spine off the bench for stability

ANSWER B

WHY Retracting and depressing the scapulae and keeping them pinned to the bench stabilizes the shoulder girdle, reduces anterior impingement risk, and supports a safer pressing pattern. Scapular elevation/protraction, excessive elbow flare, and lifting the head off the bench all increase injury risk and reduce pressing efficiency.

QUESTION 8 SINGLE CHOICE

Which macronutrient provides the most energy per gram and is essential for absorption of fat-soluble vitamins (A, D, E, and K)?

- ☐ A Carbohydrate
- ☐ B Protein
- ☒ C Fat (lipid)
- ☐ D Alcohol

ANSWER C

WHY Dietary fat supplies 9 kcal per gram and is required for absorption of fat-soluble vitamins A, D, E, and K. Carbohydrates and protein each provide 4 kcal per gram, and although alcohol provides 7 kcal per gram it is not a macronutrient and does not support vitamin absorption.

QUESTION 9

SINGLE CHOICE

During a one-on-one training session, a client suddenly clutches the left side of the chest, complains of radiating arm pain, and becomes diaphoretic and short of breath. What is the appropriate immediate response for the personal trainer?

- ☐ A Continue the workout at a lower intensity to allow recovery
- ☐ B Have the client lie down and perform a self-stretch for the chest
- ☒ C **Stop activity, call 911 (or local emergency services), and alert emergency medical services of suspected cardiac event**
- ☐ D Offer the client water and ask them to describe symptoms before taking any further action

ANSWER C

WHY Chest pain with radiation, diaphoresis, and dyspnea are classic warning signs of an acute cardiac event. The trainer must immediately stop the activity, activate emergency medical services (call 911), and remain with the client until help arrives. Continuing exercise, stretching, or delaying action by gathering more information can be life-threatening.