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PRACTICE QUESTIONS

Rehabilitation Engineering And Assistive Technology Society (RESNA)

SMSU

Seating and Mobility Specialist-UTD

EDITION

Demo

QUESTIONS

9

ISSUED

September 3, 2026

Before you begin

What this is

9 practice questions for Rehabilitation Engineering And Assistive Technology Society (RESNA) SMSU , 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, SMSU
- 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

SINGLE CHOICE

A client with amyotrophic lateral sclerosis (ALS) reports increasing fatigue and shortness of breath but still wants to self-propel a manual wheelchair for short community outings. Which seating and mobility consideration is most appropriate to address at this stage?

- ☐ **A** Recommend a standard folding manual wheelchair with no further modifications to preserve independence.
- ☒ **B** Add power-assist wheels to the existing manual wheelchair to reduce propulsion demand while preserving the manual wheelchair base.
- ☐ **C** Switch immediately to a full-time power wheelchair with head array and discontinue any manual mobility.
- ☐ **D** Prescribe a tilt-in-space only and instruct the client to be pushed by a caregiver for all outings.

ANSWER B

WHY ALS is progressive with declining respiratory and upper-limb function. Power-assist wheels reduce the metabolic and musculoskeletal cost of self-propulsion while allowing the client to continue using a manual chair for short, meaningful outings, which preserves autonomy and addresses fatigue. Option A ignores the fatigue, option C overshoots by removing manual mobility entirely, and option D removes the client's self-propulsion rather than supporting it.

QUESTION 2

SINGLE CHOICE

Which pelvic movement most directly increases the risk of sacral sitting and pressure injury in a wheelchair user?

- ☐ A Anterior pelvic tilt with a neutral lumbar spine.
- ☒ B Posterior pelvic tilt with the lumbar spine flattening into kyphosis.
- ☐ C Neutral pelvic tilt with the ischial tuberosities bearing equal weight anteriorly and posteriorly.
- ☐ D Lateral pelvic tilt maintained by an asymmetric cushion build-up on the less-involved side.

ANSWER B

WHY Posterior pelvic tilt rolls the pelvis backward; the ischial tuberosities slide forward and the sacrum moves into the seat surface, producing sacral sitting. This concentrates load on the sacrum and coccyx, increasing shear and pressure-injury risk. The other postures either distribute load more evenly or are described inaccurately.

QUESTION 3

MULTIPLE CHOICE

A seating and mobility specialist is using interface pressure mapping as part of a wheelchair cushion assessment. Which statements about pressure mapping are accurate? (Choose two.)

- ☐ **A** Pressure mapping provides absolute thresholds that predict whether an individual will develop a pressure injury.
- ☒ **B** Pressure mapping can be used to compare relative load and contact area between two cushions for the same client.
- ☒ **C** Pressure mapping is a useful visual biofeedback tool to teach a client to perform and recognize successful weight shifts.
- ☐ **D** Pressure mapping replaces the need for clinical skin inspection in determining pressure-injury risk over the ischial tuberosities.

ANSWER B - C

WHY Pressure mapping shows relative pressure distribution and contact area, so it is well suited to comparing cushions for the same client and to providing visual biofeedback during weight-shift training. It does not provide absolute, individual predictive thresholds for pressure injury, and it does not replace clinical skin assessment, which remains essential.

QUESTION 4

SINGLE CHOICE

Moving the rear axle of a manual wheelchair forward relative to the seat frame primarily results in which change?

- ☐ A Increased rolling resistance over level surfaces.
- ☐ B Decreased maneuverability and a larger turning radius.
- ☒ C **Reduced stability in the forward tipping direction and easier wheelies.**
- ☐ D Increased rearward stability but heavier perceived push effort.

ANSWER C

WHY Moving the rear axle forward reduces the load on the rear wheels (more weight over the casters) and reduces the wheelbase, which makes the chair less stable to the rear and easier to pop a wheelie for obstacle negotiation. It does not inherently increase rolling resistance, and it typically improves maneuverability and reduces push effort.

QUESTION 5

SINGLE CHOICE

Which cushion material characteristic is most associated with high immersion and maximal envelopment around bony prominences for a client at risk of pressure injury?

- ☐ A Firm closed-cell foam with a deeply contoured base.
- ☒ B **Viscoelastic foam that deforms slowly under load and returns slowly when unloaded.**
- ☐ C Rigid plastic shell with a thin, non-stretch cover.
- ☐ D Honeycomb base with a tension-adjustable sling seat.

ANSWER B

WHY Viscoelastic foam has slow recovery and conformability that promotes immersion and envelopment, helping to offload bony prominences such as the ischial tuberosities. Closed-cell foam is too firm, rigid shells with thin covers do not envelop, and a sling seat actually concentrates pressure rather than distributing it.

QUESTION 6

SINGLE CHOICE

Which outcome is most directly associated with structured wheelchair skills training for a new manual wheelchair user?

- ☐ A Increased reliance on caregiver assistance for community mobility.
- ☒ B Reduced upper-limb pain and injury from compensatory propulsion techniques.
- ☐ C Elimination of the need for a properly configured wheelchair.
- ☐ D Inability to perform controlled descents on ramps.

ANSWER B

WHY Wheelchair skills training teaches users efficient, biomechanically sound propulsion (for example, long smooth strokes with hands falling below the pushrim) and techniques such as wheelies and controlled descents, which reduce upper-limb repetitive strain injury risk. Properly configured equipment and active user participation remain essential and are not replaced by training.

QUESTION 7

MULTIPLE CHOICE

Which items are essential components of the mat examination portion of a seating assessment? (Choose two.)

- ☒ A Documentation of fixed and flexible postural deformities at the pelvis, spine, and lower extremities.
- ☒ B Measurement of joint range of motion and muscle tone relevant to seated posture.
- ☐ C Manufacturer warranty registration for the trial cushion being used.
- ☐ D Trial-fitting of standardized seating components in supine, sidelying, or seated positions.

ANSWER A • B

WHY The mat exam identifies fixed versus flexible deformities at the pelvis, spine, hips, knees, and ankles and measures available range of motion and tone; this information drives cushion and backrest selection and positioning goals. Warranty registration is administrative, and trial seating is part of equipment simulation rather than the mat exam itself.

QUESTION 8

SINGLE CHOICE

A client with a fixed posterior pelvic tilt, bilateral hip flexion contractures of 30 degrees, and a flexible thoracic kyphosis needs a wheeled mobility base. Which configuration is most appropriate as a starting point?

- ☐ **A** A standard sling back, sling seat folding chair with the footrests set at 90 degrees and no tilt.
- ☒ **B** A wheelchair with an open seat-to-back angle (rear of seat lower than front), appropriate seat depth, and footrests that support the contractured lower-limb position.
- ☐ **C** A chair with a sling back and an aggressively anteriorly tilted seat to force a neutral pelvis.
- ☐ **D** A rear-anti-tip-removed chair with the footrests eliminated to encourage neutral lower-limb posture.

ANSWER B

WHY For fixed contractures, the seating system must accommodate, not fight, the deformities. Opening the seat-to-back angle and providing a posterior pelvic positioner and properly angled footrests support the fixed hip flexion while permitting an upright trunk. The other options attempt to force correction of a fixed deformity or eliminate necessary support.

QUESTION 9

SINGLE CHOICE

Which anterior support is most appropriate when trunk control is fair but the client repeatedly leans forward and cannot consistently maintain an upright midline posture in the wheelchair?

- ☐ A A four-point, subaxillary, chest-strap-style anterior trunk support tightened firmly across the upper chest.
- ☐ B A swing-away, anterior, shoulder-level harness-style support used during transport only.
- ☒ C **A properly positioned anterior pelvic positioning belt at a 45-degree angle to maintain pelvic position as the foundation of trunk control.**
- ☐ D A solid, rigid, non-yielding chest bar placed at the level of the sternal notch.

ANSWER C

WHY The pelvis is the foundation of postural control. A properly positioned anterior pelvic positioning belt (typically at 45 degrees over the proximal thighs) stabilizes the pelvis, which in turn improves trunk control for clients who lean forward due to poor pelvic stability. Tight chest straps or rigid bars across the upper chest are generally contraindicated because of the risk of impairing respiration, swallowing, and shoulder retraction; the harness option is limited to transportation contexts and does not address seated function.