ABRET
Neurodiagnostic Credentialing and Accreditation

Measurement Assessment

Candidate Information

The skill-based assessment will establish the ability of technologists to measure accurately prior to being awarded credentials.

The expectations for safe and effective performance of this task are outlined in the 2018 EEG Practice Analysis, Domain II, T-1, and T-5. This will be an evaluation of 10/20 measuring skills, not electrode placement.

The candidate is expected to completely measure the “Sam” mannequin head according to the International 10-20 System of Electrode Placement within 30 minutes, and obtain electrode placement measurement values with symmetry of homologous areas within 1 cm.

Once passed, this pre-requisite assessment will satisfy the requirement for two years.

“…obtain electrode placement measurement values with symmetry of homologous areas within 1 cm.”

I don’t know how to measure

Don’t worry. We are not surprised. Some people were never taught or work in a lab where estimating and visualizing is the norm.

However, earning the R. EEG T. credential requires learning the proper procedures and best practices, which include measuring for accurate electrode placement.

We want you to be successful!

Samuel Mannequins are available through ASET, www.aset.org/samhead, and Pivot Point, www.pivot-point.com. Other mannequins may be available at Beauty Supply stores.

The score sheet is available on the ABRET website for practice, Measurement Assessment

It may be possible to find some workshops on the 10/20 System at State and Regional society meetings.

There are some YouTube® videos on the 10/20 System available for viewing and ASET offers a free online course, EEG 302, for checking measurements and electrode placement.

This is an exam where candidates have all of the answers ahead of time.

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Tips from examiners

- Always make your marks on the same side of the tape measure.
- Move the tape measures as little as possible.
- Make sure all landmarks are on the same plane.
- Identify your landmarks with a different color, so you know the difference between the inion and Oz.
- If you routinely use calipers, gloves, rubber bands, a comb, paper tape measure, bring them with you.
- Get a Sam mannequin and practice!
- Remember to intersect your marks at F3, C3, P3, F4, C4, P4, T7, and T8.
- Use a mentor who knows how to measure properly, preferable an R. EEG T.!
- Once finished, stand behind the head and visually evaluate.
  - Are the midline marks straight?
  - Are corresponding placements on the left and right symmetrical?

ABRET provides washable markers, a retractable tape measure, hair clips, scratch paper, and alcohol wipes.

Don't do this

Don't try to learn the 10/20 system the week before the exam.

Don't use many colors of markers on the head and confuse yourself.

Don't mark the inion too low. It should be on the same plane as your pre–auricular points.

Don't use the inion mark to level occipital marks; use Oz

The Assessment

Each 10/20 position should have an X where the electrode will be placed. Examiners will check measurements, from X to X. Following through all steps of the 10/20 System of Measurement will result in an X for all positions.

Use the ABRET MA Score Sheet for practice. Measure 'interelectrode' distances and record the measurement in cm, i.e., Fp1 – F7 = 5.6 cm.

Subtract the smallest measurement from the largest measurement in each chain. The difference should be less than 1.1 cm.

Anatomical accuracy will be assessed. This will be based on the landmarks identified by the candidate.

Practice

- Practice is key! Measure everyone, family, friends, and patients!
- Practice and grade yourself, or have others grade you.
- Practice until your marks are consistently below 1.1 cm in each chain.
- Practice for months to perfect your technique before testing.
- As you practice, work toward decreasing the time it takes you to measure so you have time to recheck and correct any errors.

ABRET encourages professional neurodiagnostic societies to conduct workshops on the 10/20 System. We continue to consider additional ways to assist all technologists in meeting the goal of becoming credentialed.

- ABRET does not endorse any particular YouTube® video for learning 10/20 head measurement.

EEG Pathway III
Measurement Assessment

The instructions below pertain only to Pathway III eligible candidates.

Requirements for an in-house measurement assessment:

1. A current R. EEG T. who can score your measurements.
2. A mannequin head with hair, or a volunteer.
3. The ABRET Measurement Assessment scoresheet.
4. Review the Measurement Assessment Handbook.

Complete this signature form and submit along with your passing scoresheet.

Candidate Name (printed): _____

R. EEG T. Assessor Attestation:

I, _____, R. EEG T. # _____, confirm that:

☐ I observed this candidate measure the head (mannequin/volunteer)

☐ I checked the electrode placement marks and completed the ABRET Measurement Assessment form for the measurements observed, confirmed above.

☐ The candidate has passed within the standards set forth by ABRET.

☐ Falsification of measurement assessment results may put my ABRET credential in jeopardy. (RUL-8)

_____ Date: _____
R. EEG T. Signature

_____ Date: _____
Candidate Signature

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MEASUREMENT ASSESSMENT

PASS FAIL

(Circle One)

CANDIDATE _____
(First and Last Name)

EXAMINERS/R. EEG T. _____ DATE _____ EXAM TIME _____

INTERNATIONAL 10/20 SYSTEM

Record measurements in the blanks below. Calculate differences between longest and shortest distances in each group. **The candidate fails if there is a difference greater than 1.0 centimeter.**

1. Fpz_____Fz_____Cz_____Pz_____Oz Difference_____
2. T3_____C3_____Cz_____C4_____T4 Difference_____
   (T7) (T8)
3. Fp1_____F7_____T3_____T5_____O1 Difference_____
   (T7) (P7)
4. Fp2_____F8_____T4_____T6_____O2 Difference_____
   (T8) (P8)
5. _____ _____ _____ _____ Difference 3&4
6. Fp1_____F3_____C3_____P3_____O1 Difference_____
7. Fp2_____F4_____C4_____P4_____O2 Difference_____
8. _____ _____ _____ _____ Difference 6&7
9. F7_____F3_____Fz_____F4_____F8 Difference_____
10. T5_____P3_____Pz_____P4_____T6 Difference_____
    (P7) (P8)
11. Fp1_____Fp2 O1_____O2 Difference_____
12. Nasion_____Fpz Inion_____Oz Difference_____
13. L Pre Aur_____T3 R Pre Aur_____T4 Difference_____
    (T7) (T8)

ANATOMICAL PLACEMENT

____ correct

____ incorrect