

01	A	B	C	D	E
02	A	B	C	D	E
03	A	B	C	D	E
04	A	B	C	D	E
05	A	B	C	D	E
06	A	B	C	D	E
07	A	B	C	D	E
08	A	B	C	D	E
09	A	B	C	D	E
10	A	B	C	D	E
11	A	B	C	D	E
12	A	B	C	D	E
13	A	B	C	D	E

14	A	B	C	D	E
15	A	B	C	D	E
16	A	B	C	D	E
17	A	B	C	D	E
18	A	B	C	D	E
19	A	B	C	D	E
20	A	B	C	D	E
21	A	B	C	D	E
22	A	B	C	D	E
23	A	B	C	D	E
24	A	B	C	D	E
25	A	B	C	D	E
26	A	B	C	D	E

27	A	B	C	D	E
28	A	B	C	D	E
29	A	B	C	D	E
30	A	B	C	D	E
31	A	B	C	D	E
32	A	B	C	D	E
33	A	B	C	D	E
34	A	B	C	D	E
35	A	B	C	D	E
36	A	B	C	D	E
37	A	B	C	D	E
38	A	B	C	D	E
39	A	B	C	D	E

PRACTICE QUESTIONS

ABRET Neurodiagnostic Credentialing and Accreditation

EEG

Registration Exam for Electroencephalographic Technologists

EDITION

Demo

QUESTIONS

9

FORMAT

Limited Edition PDF

Before you begin

What this is

9 practice questions for ABRET Neurodiagnostic Credentialing and Accreditation **EEG**, 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, **EEG**
- the question number
- the email address on your order

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

QUESTION 1 SINGLE CHOICE

According to the international 10-20 electrode placement system, which electrode is placed at the vertex of the head?

- ☐ A Fz
- ☒ B Cz
- ☐ C Pz
- ☐ D Oz

ANSWER B

WHY Cz is placed at the vertex, the point midway between the nasion and inion and between the preauricular points. Fz is at the frontal midline, Pz at the parietal midline, and Oz at the occipital midline.

QUESTION 2 SINGLE CHOICE

Which EEG pattern is considered a normal variant of wakefulness in adults and is characterized by bursts of rhythmic 4–7 Hz activity over the temporal regions that attenuates with eye opening?

- ☐ A Frontal intermittent rhythmic delta activity (FIRDA)
- ☐ B Temporal slowing of the elderly
- ☒ C Rhythmic temporal theta bursts of drowsiness (RMTD)
- ☐ D Subclinical rhythmic electrographic discharges in adults (SREDA)

ANSWER C

WHY Rhythmic temporal theta bursts of drowsiness (RMTD), also called rhythmic midtemporal discharges (RMTD), is a normal variant seen in relaxed wakefulness and drowsiness in young adults. FIRDA is typically abnormal, temporal slowing of the elderly is not a normal variant, and SREDA is a rare pattern in older adults whose significance is uncertain but not classified as a benign variant.

QUESTION 3

SINGLE CHOICE

Which EEG pattern is characterized by generalized, bilaterally synchronous, symmetric 3 Hz spike-and-wave discharges that appear during childhood and typically remit by adulthood?

- ☐ A Lennox-Gastaut pattern
- ☐ B Hypsarrhythmia
- ☒ C Absence seizure pattern
- ☐ D Periodic pattern

ANSWER C

WHY Childhood absence epilepsy classically shows generalized 3 Hz spike-and-wave discharges provoked by hyperventilation. Lennox-Gastaut shows slower (<2.5 Hz) spike-and-wave, hypsarrhythmia is the pattern of infantile spasms, and periodic patterns are seen in diffuse cerebral injury such as SSPE or CJD.

QUESTION 4

SINGLE CHOICE

During an EEG recording, which low-frequency filter (LFF) setting is most appropriate for routine recording to attenuate slow artifact while preserving true cerebral slow activity?

- ☐ A 0.01 Hz
- ☐ B 0.1 Hz
- ☒ C 1 Hz
- ☐ D 5 Hz

ANSWER C

WHY A 1 Hz LFF is the conventional setting for routine EEG; it removes very slow sweat and movement artifact while preserving genuine delta-range slow activity. Settings of 0.01–0.1 Hz are used for long-term monitoring, and 5 Hz would eliminate most delta and theta activity.

QUESTION 5

MULTIPLE CHOICE

Which of the following are recognized contraindications to performing hyperventilation during an EEG? (Choose two.)

- ☒ **A** Recent intracranial hemorrhage
- ☒ **B** Significant cardiopulmonary disease
- ☐ **C** Use of benzodiazepine medications
- ☐ **D** Known Moyamoya disease

ANSWER A - B

WHY Hyperventilation reduces cerebral blood flow and can worsen ischemia, so it is contraindicated in patients with recent intracranial hemorrhage and in those with significant cardiopulmonary disease. Benzodiazepines are not a contraindication (they may actually reduce provoked epileptiform activity). Moyamoya is sometimes an indication, not a contraindication, as HV can help elicit the characteristic posterior slowing seen in that condition.

QUESTION 6

MULTIPLE CHOICE

Which of the following are essential components of proper skin preparation before applying collodion-attached EEG electrodes? (Choose two.)

- ☐ **A** Abrading the skin with a blunt needle or paste to lower impedance
- ☒ **B** Washing the scalp with pumice-based prepping paste and measuring electrode impedance
- ☐ **C** Applying electrode gel only after the patient lies down for the recording
- ☒ **D** Checking that each electrode impedance is below 5 kOhms and balanced between sites

ANSWER B - D

WHY Proper prep includes using a pumice-based abrasive paste to reduce impedance and verifying that impedance is below approximately 5 kOhms and reasonably balanced across electrodes (typically within 1–2 kOhms of each other). Abrading with a sharp or blunt needle is not standard practice and could injure skin; gel must be applied during application so that contact is established from the start.

QUESTION 7

SINGLE CHOICE

A 60 Hz interference artifact appears in every channel of an EEG tracing. Which of the following is the most appropriate first troubleshooting step?

- ☐ A Increase the high-frequency filter to 70 Hz
- ☐ B Re-prep and reapply the affected electrodes
- ☒ C Check the electrode-to-amplifier connections, ground, and nearby electrical equipment
- ☐ D Reduce sensitivity

ANSWER C

WHY Generalized 60 Hz interference most often reflects a poor ground, loose electrode junction, or external electrical interference; the technologist should first check the ground electrode, all electrode connections, and identify/turn off nearby electrical devices. Filtering the artifact out with a 70 Hz notch would mask rather than solve the problem, sensitivity changes do not affect line noise, and re-prepping only helps if individual electrodes are bad.

QUESTION 8

SINGLE CHOICE

Which of the following is a characteristic feature of the normal EEG of a term neonate in quiet sleep?

- ☐ A Continuous mixed-frequency activity with frequent delta waves
- ☒ B Trace alternant pattern of bursts of mixed frequencies alternating with periods of relative quiescence
- ☐ C Dominant 8–12 Hz alpha rhythm
- ☐ D Hypsarrhythmia pattern

ANSWER B

WHY Trace alternant is the hallmark EEG pattern of quiet (non-REM) sleep in term neonates, consisting of 4–8 second bursts of mixed-frequency activity alternating with 4–8 second periods of relative attenuation. Continuous high-amplitude delta is characteristic of the very premature infant; a mature alpha rhythm and hypsarrhythmia are not normal neonatal findings.

QUESTION 9

SINGLE CHOICE

Which sensitivity setting (in microvolts per millimeter) is commonly used as the standard for routine adult EEG recording?

- ☐ A 1 $\mu\text{V}/\text{mm}$
- ☒ B 7 $\mu\text{V}/\text{mm}$
- ☐ C 15 $\mu\text{V}/\text{mm}$
- ☐ D 50 $\mu\text{V}/\text{mm}$

ANSWER B

WHY 7 $\mu\text{V}/\text{mm}$ is the standard sensitivity for routine adult EEG recordings. 1 $\mu\text{V}/\text{mm}$ is too sensitive and amplifies noise, 15 $\mu\text{V}/\text{mm}$ may be used when activity is very high amplitude, and 50 $\mu\text{V}/\text{mm}$ is generally too insensitive for routine use.