

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

American Board of Clinical Neurophysiology (ABCN)

ABCN1

ABCN Certification Exam Part I

EDITION

Demo

QUESTIONS

9

FORMAT

Limited Edition PDF

Before you begin

What this is

9 practice questions for American Board of Clinical Neurophysiology (ABCN) ABCN1 , 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, ABCN1
- the question number
- the email address on your order

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

QUESTION 1

SINGLE CHOICE

Which EEG rhythm is characterized by a frequency range of 8–13 Hz and is typically prominent over the posterior head regions in awake adults with eyes closed?

- ☐ A Delta rhythm
- ☐ B Theta rhythm
- ☒ C Alpha rhythm
- ☐ D Beta rhythm

ANSWER C

WHY The alpha rhythm (8–13 Hz) is the posteriorly dominant rhythm seen in relaxed wakefulness with eyes closed. Delta (<4 Hz) and theta (4–7 Hz) are slower and not characteristic of this awake state, while beta (>13 Hz) is faster and typically associated with active thinking or medication effects.

QUESTION 2

SINGLE CHOICE

Which somatosensory evoked potential (SSEP) peak, generated by the dorsal column nuclei, is used to assess peripheral conduction following median nerve stimulation?

- ☐ A N9
- ☒ B N13
- ☐ C P14
- ☐ D N20

ANSWER B

WHY The N13 (cervical) potential reflects postsynaptic activity in the dorsal column nuclei / cervical spinal cord following median nerve stimulation. N9 is the brachial plexus (peripheral) potential, P14 is generated rostrally in the brainstem, and N20 is the cortical response.

QUESTION 3

SINGLE CHOICE

In a motor nerve conduction study, the recorded response obtained when a supramaximal stimulus is delivered to a motor nerve is called the:

- ☐ A Sensory nerve action potential (SNAP)
- ☒ B Compound muscle action potential (CMAP)
- ☐ C F-wave
- ☐ D H-reflex

ANSWER B

WHY A supramaximal motor nerve stimulus produces a compound muscle action potential (CMAP), recorded over the muscle innervated by that nerve. The SNAP is the sensory equivalent; the F-wave and H-reflex are late responses elicited by different stimulation paradigms.

QUESTION 4

SINGLE CHOICE

According to the International 10–20 System, which electrode position corresponds to the vertex of the head?

- ☐ A Fz
- ☒ B Cz
- ☐ C Pz
- ☐ D Oz

ANSWER B

WHY Cz designates the vertex, located at the intersection of the sagittal midline and the coronal midline. Fz is the frontopolar midline, Pz is the parietal midline, and Oz is the occipital midline.

QUESTION 5 SINGLE CHOICE

Which type of spontaneous EMG activity is characterized by regular, rhythmic discharges at 1–2 Hz that fire briefly after needle insertion and then subside?

- ☐ A Fibrillation potentials
- ☐ B Positive sharp waves
- ☒ C Insertional activity
- ☐ D Myotonic discharges

ANSWER C

WHY Normal insertional activity is the brief burst of electrical activity produced when the needle is moved through muscle, lasting only a few hundred milliseconds. Prolonged insertional activity may suggest pathology, whereas fibrillation potentials, positive sharp waves, and myotonic discharges are abnormal spontaneous discharges.

QUESTION 6 SINGLE CHOICE

Which EEG pattern is classically associated with non-convulsive status epilepticus in comatose patients and consists of periodic generalized sharp waves occurring at approximately 1–2 second intervals?

- ☒ A Generalized periodic discharges (GPDs)
- ☐ B Burst-suppression
- ☐ C Alpha coma
- ☐ D Spindle coma

ANSWER A

WHY Generalized periodic discharges (GPDs), formerly called periodic epileptiform discharges, at ~1–2 sec intervals are characteristic of conditions such as non-convulsive status epilepticus and post-anoxic encephalopathy. Burst-suppression features alternating high-amplitude bursts and attenuation; alpha coma and spindle coma are specific coma patterns with continuous activity.

QUESTION 7

SINGLE CHOICE

Which visual evoked potential finding is most consistent with demyelination of the anterior visual pathway, such as in multiple sclerosis?

- ☐ A Normal P100 latency with normal amplitude
- ☒ B Prolonged P100 latency with relatively preserved amplitude
- ☐ C Absent P100 with normal flash response
- ☐ D Reduced P100 amplitude with normal latency

ANSWER B

WHY Demyelination of the optic nerve classically produces a delayed (prolonged) P100 latency with relatively preserved amplitude, because slowed conduction rather than axonal loss predominates early. Loss of amplitude with normal latency suggests primarily axonal injury; an absent pattern-reversal VEP with preserved flash VEP suggests severe pre-chiasmal pathology.

QUESTION 8

SINGLE CHOICE

By EEG convention, an upward pen deflection on the tracing indicates that the input terminal 1 electrode is:

- ☐ A More negative than input terminal 2
- ☒ B More positive than input terminal 2
- ☐ C At the same potential as input terminal 2
- ☐ D Disconnected from the patient

ANSWER B

WHY The international 10–20 EEG convention specifies that an upward pen deflection indicates the input terminal 1 (G1) electrode is more negative (or, equivalently, that input 2 is relatively more positive). This convention is used so that negative-up displays remain consistent across laboratories.

QUESTION 9

TRUE FALSE

Positive occipital sharp transients of sleep (POSTS) are considered a normal benign variant of drowsiness and light sleep in adults.

☒ **A** True☐ **B** False**ANSWER A**

WHY POSTS are sharp transients with a positive (upward) deflection at the occipital electrodes, occurring during drowsiness and NREM stage 1–2 sleep. They have no clinical significance and are classified as a normal benign variant.

mometrix.net