THE BOARD OF ELECTROMYOGRAPHY TECHNOLOGISTS OF CANADA
B.R.E.T.C.

REGISTRATION EXAMINATION

A registration examination for EMG technologists is offered by the Board of Registration of Electromyography Technologists of Canada (BRETC). This board is comprised of physician members of the Canadian Society of Clinical Neurophysiologists (CSCN) EMG Section and registered technologist members of the Association of Electromyography Technologists of Canada (AETC).

The purpose of the examination is to assess the competence of the individual to effectively carry out the technical tasks in an EMG laboratory. Candidates' technical skill, insight, adaptability and theoretical knowledge is evaluated during an examination comprised of an OSCE style practical evaluation and a written exam.

EXAMINATION FEES

(Including re-write)

PRACTICAL EXAM $550
WRITTEN EXAM $450

Eligibility:

In order to participate in the examination, an individual must be a member of the AETC and must have completed a variety of unassisted nerve conduction studies on at least 1,000 patients. Registration certificates can be revoked at any time if a candidate has misrepresented his/her/their credentials and made a fraudulent application.

Training:

Technologist trainees must strive to achieve a level of competency that enables them to perform a variety of nerve conduction studies on patients without contribution from another technologist or supervising electromyographer. **The minimum 1,000 patient requirement is to be fulfilled after this level of competency is achieved.**

Each candidate will be required to submit a declaration of training and employment including names and contact information of supervising technologists and physicians, and the number of patients seen independently. The supervising physician will be required to sign a declaration confirming this information. The registrar may contact the supervising physician or technologist to clarify any information submitted.

AETC Basic Workshop:

A basic workshop on nerve conduction studies **may** be conducted by the AETC Education Committee prior to the registration examination. This will be held during the AETC Annual Conference if the meeting is scheduled prior to the examination. If scheduling does not allow for an in-person workshop, the AETC **may** offer a virtual workshop prior to the exam. These informal sessions usually include review of equipment, basic physiology and anatomy, specific nerve conduction study techniques, patient considerations and troubleshooting. This is not specifically a pre-examination workshop nor is it mandated, organized or sponsored by the BRETC in any way. The volunteer technologists from the AETC involved in the workshop have no knowledge of the content of the exam. Any inquiries with respect to the workshop should be forwarded to vice-president@aetc.ca.

Written Examination:

A three-hour written examination will evaluate a candidate's knowledge of:

- nerve and muscle anatomy
- NCS techniques
- waveform recognition
- clinical physiology of the nerve and muscle
- instrumentation (for NCS and EMG)
- electrodes (for NCS and EMG)
- technical aspects of NCS
- technical, physical, anatomical and physiological factors which may affect results
- candidates will be required to perform some simple mathematical calculations, to recognize obvious and classic pathological features observed in NCS, and to distinguish pathophysiological abnormalities from artifact.

Practical Examination:

The practical examination format is a 3-station OSCE, lasting approximately 90 minutes and is intended to be an assessment of the candidate's ability to set up and carry out conventional NCS on a normal volunteer patient. Patient handling, selection of instrument settings, application of electrodes, stimulation, management of artifact, quality of traces, reading and calculation of results, and practice of electrical safety will all be evaluated. There will not be any questions on the practical examination related to needle EMG.

Candidates will be assisted in operating unfamiliar EMG equipment, but must be able to independently specify settings for the NCS being performed. The EMG equipment available for the exam can vary depending upon the host laboratory. The BRETC Registrar will endeavor to advise the candidates of the EMG system being used in advance of the exam. Candidates are welcome to bring their own electrodes and accessories for use during the practical portion. Note that some systems do not allow for swapping out stimulators for another type. The candidates will not be advised about the polarity of the stimulating and recording electrodes and must not assume that the equipment they are using for the exam is equipped with signal isolation.

Candidates may perform NCS employing the techniques used in their home labs. Candidates must be aware of alternate methods of testing the same nerves, the pros and cons of each technique, and must be familiar with normative data for the techniques utilized.

Candidates will be penalized for what is observed as indiscriminate use of current and/or stimulus lead.

Results:

Results of the examination will be emailed within one week of the examination date. The decision of the Board is final. If deemed necessary by the Board, feedback/performance evaluations will be emailed to the candidates that have not passed the examination. Registration certificates will be mailed to all successful candidates within 8 weeks of the examination.

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