

# **American Concrete Institute**

## **Certification Policies for Concrete Laboratory Testing Technician – Level 1 Concrete Laboratory Testing Technician – Level 2**

*Approved by the Certification Programs Committee July 6, 2007*

*Last revised by the Certification Programs Committee April 1, 2008*

The certification program policies are broken down into eight sections as follows:

- Section 1. Certification Criteria
- Section 2. Examination Criteria
- Section 3. Reexamination Criteria
- Section 4. Appeals Criteria
- Section 5. Sponsoring Group Criteria
- Section 6. Examiner/Supplemental Examiner Criteria
- Section 7. ACI Responsibilities
- Section 8. Recertification Criteria

## SECTION 1.0 CERTIFICATION CRITERIA

- 1.01 The American Concrete Institute (ACI) certification program for Concrete Laboratory Testing Technician – Level 1 (CLTT1) requires current certification as an ACI Concrete Strength Testing Technician (CSTT) and ACI Aggregate Testing Technician – Level 1 (ATT1).
- 1.02 No specific education or work experience is required for CLTT1 certification.
- 1.03 The American Concrete Institute (ACI) certification program for Concrete Laboratory Testing Technician – Level 2 (CLTT2) shall require successful completion of both a written examination and a performance examination.
- 1.04 Certification as a CLTT2 requires current ACI CLTT1 certification and at least one year (2000 hours) of approved work experience, of which up to one-half may be substituted with a minimum of 60 credit hours of verified advanced education.
- 1.05 ACI certification for CLTT1 and/or CLTT2 shall be valid for a period of five [5] years from the date of completion of all certification requirements.
- 1.06 A technician shall be permitted to renew certification by satisfying the recertification requirements.

## SECTION 2.0 EXAMINATION CRITERIA

### GENERAL REQUIREMENTS

- 2.01 ACI CLTT1 certification will be granted upon completion of the ACI CSTT and the ACI ATT1 certifications.
- The ACI CLTT1 certification will be issued upon request and proof of completion of the aforementioned certification requirements.
- 2.02 The content of the written examination for certification as a CLTT2 shall be derived directly from the following two (2) ACI Standards and the four (4) following ASTM Standards:
- ACI**
- |       |  |
|-------|--|
| 214   | Evaluation of Strength Test Results of Concrete                  |
| 211.1 | Selecting Proportions for Normal, Heavyweight, and Mass Concrete |
- ASTM**
- |      |   |
|------|---|
| C192 | Making and Curing Concrete Test Specimens in the Laboratory     |
| C470 | Molds for Forming Concrete Test Cylinders Vertically            |
| C496 | Splitting Tensile Strength of Cylindrical Concrete Specimens    |
| C42  | Obtaining and Testing Drilled Cores and Sawed Beams of Concrete |

The content of the performance examination for certification as a CLTT2 shall be derived from ASTM C192.

Information contained in the footnotes and appendices of the afore-referenced Standards shall not be subject for examination.

Both the written and performance examinations for CLTT2 must be successfully completed within a one (1) year period.

- 2.03 The examinations shall be conducted by the examiner, proctors, and/or supplemental examiners as applicable. [See Section 6.]
- 2.04 The examiners, proctors, supplemental examiners, and/or sponsoring groups have no jurisdiction over the content of any examination, or over the grading of the written examination.
- 2.05 The CLTT2 written examination is open book; reference materials other than those approved by ACI shall not be permitted in the examination area. The performance examination is closed book; notes or other technical material shall not be permitted in the examination area. Simple function (non-programmable) pocket calculators shall be permitted for either examination.

### ***WRITTEN EXAMINATION***

- 2.06 The written examination for certification as a CLTT2 shall consist of approximately seventy-five [75] multiple choice questions, with eight to twelve [8-12] questions on each Standard.
- 2.07 A maximum of two [2] hours shall be permitted for completion the written examination.
- 2.08 Oral administration of the written examination is permitted, contingent upon approval by the ACI Certification Department.
- 2.09 Successful completion of the written examination shall be considered as meeting both of the following requirements:
  - A) Score sixty percent [60%] or higher on each individual Standard (e.g. six [6] correct out of ten [10] questions); AND
  - B) Score a minimum of seventy percent [70%] for the overall examination (e.g., seventy [70] correct out of a possible one hundred [100])

## **PERFORMANCE EXAMINATION**

- 2.10 The performance examination for certification as an ACI CLTT2 shall require the examinee to perform, pursuant to the contents of the ACI performance examination checklist, procedures described in ASTM C192.
- Note: Some procedures and test methods may be described verbally as indicated on the performance exam checklists. Specific instructions keyed to these areas and describing administration procedures will be included with the exam materials for each session.*
- An applicant who is currently certified as an ACI Concrete Field Testing Technician -- Grade I may be waived from performing the procedures for C 143, C 173, C 231, C 138, and C 1064 under the ASTM C 192 performance examination if he /she holds current certification as an ACI Concrete Field Testing Technician - Grade I.*
- Proof of certification must be verified by the Examiner/Supplemental Examiner at the time of testing for the waiver to be granted.*
- 2.11 The examinee shall conduct the performance examination in the direct presence of the examiner or supplemental examiner(s).
- 2.12 The examinee's performance shall be evaluated based on the criteria of the performance examination checklist.
- 2.13 Grading for the individual performance examinations shall be on a pass/fail basis only, with the examiner/supplemental examiner indicating pass or fail for each step of the checklist.
- 2.14 Incorrect performance, or omission of one or more of the steps of the performance checklist, shall constitute failure of that trial.
- 2.15 An examinee shall be allowed a second trial, on the same day of the examination, if the first trial was not successfully completed.
- 2.16 The second trial of a particular test shall not be conducted immediately following the first trial.
- 2.17 An examinee shall be permitted to suspend one trial and begin the procedure over again. A voluntary suspension of a trial shall not be counted as a failure of that trial.
- 2.18 The examiner/supplemental examiner shall not stop a trial at any point which an error is made.
- 2.19 A second trial, or voluntary repeat of a trial, shall require performance of the entire test method from the beginning, not from the point the error was made.

- 2.20 Immediately following completion of each trial, the examiner/supplemental examiner shall inform the examinee of the results, either pass or fail.
- 2.21 When a failure of a trial occurs, the examiner/supplemental examiner shall inform the examinee of the particular step(s) performed incorrectly.
- 2.22 The examinee shall be permitted to leave the examination area between trials to consult notes or books.
- 2.23 The examinee shall have the option of using either a Type A or Type B meter when performing ASTM C231 as included in the C192 checklist.
- 2.24 It shall be the Sponsoring Group's responsibility to provide equipment which conforms to the applicable ASTM Standards and that it is in good working order. The examinee shall not be penalized as a result of faulty or incorrect equipment.
- Note:** *In cases where the Supplemental Examiners have been approved to conduct the performance examination without the direct supervision of an approved Examiner, the Supplemental Examiner shall be responsible for determining that the equipment requirements listed in Section 2.24 are met.*
- 2.25 Failure of C192 after two [2] trials will constitute failure of the performance examination.

### **SECTION 3.0 REEXAMINATION CRITERIA**

- 3.01 Failure of the written examination by either of the criteria cited under Section 2.09 shall require reexamination on the entire written examination.
- 3.02 Failure or invalidation of the performance examination for CLTT2 shall require reexamination on the entire performance examination.
- 3.03 Reexamination on the written or performance examination must be taken within one [1] year of the initial examination. Otherwise, both the written and the performance examinations must be retaken in their entireties.

### **SECTION 4.0 APPEALS CRITERIA**

- 4.01 All appeals shall be directed initially to the examiner.
- 4.02 In the event that the examinee is not satisfied with the decision of the examiner regarding an appeal. The examinee may pursue an appeal with ACI according to the following order:
1. Local Sponsoring Group
  2. ACI Director of Certification
  3. The Certification Appeals Committee [consisting of the Director of Certification; the Chairman of the Certification Programs Committee, and the Chairman of Committee C620]

4. Committee C620, Laboratory Testing Technician Certification
5. Certification Programs Committee

4.03 Appeals submitted to ACI for consideration must be received, in writing, within sixty [60] days of the receipt of the examination at ACI Headquarters.

## **SECTION 5.0 SPONSORING GROUP CRITERIA**

Groups desiring to conduct ACI Certification program(s) shall adhere to the current Policy on Sponsoring Groups for Certification.

*NOTE: The Sponsoring Group Policy was approved by the ACI Board of Direction on March 21, 1991.*

## **SECTION 6.0 EXAMINER / SUPPLEMENTAL EXAMINER CRITERIA**

- 6.01 The examiner shall be authorized by ACI to conduct the ACI certification examinations for CLTT2.
- 6.02 The examiner shall be approved by ACI. Qualifications shall be submitted on Form D1/D3 and shall be evaluated in accordance with the criteria on Form D-13.
- 6.03 The examiner shall meet the following requirements:
  - A) Be a registered professional engineer;
  - B) Have had at least two [2] years of recent experience in concrete construction, inspection, or testing; and
  - C) Be thoroughly familiar with the current applicable Standards.
- 6.04 Examiners, supplemental examiners, and proctors shall be unrelated professionally and personally to the examinees.
- 6.05 Examiners/supplemental examiners shall not examine anyone on the performance examination who is employed in the same organization. Governmental or other organizations may petition ACI, in writing, and request a waiver of this requirement. Waivers shall be granted, on a case by case basis, only if it can be shown that the intent of the policy will be maintained.
- 6.06 Supplemental examiners shall be permitted to assist in conducting the performance examination, and may be authorized to conduct the performance examination without direct supervision of an Examiner with prior approval of ACI Committee C620.

- 6.07 Supplemental examiners shall satisfy the following requirements:
- A) Have had recent experience in concrete testing;
  - B) Be selected and adjudged qualified by the examiner or ACI Committee C620;
  - C) Be considered trustworthy and conscientious.
- 6.08 Proctors shall be permitted to assist the examiner in conducting the written examination.
- 6.09 Proctors shall satisfy the following requirements:
- A) Be considered trustworthy and conscientious by the Examiner.
- 6.10 The examiner shall be directly responsible for:
- A) Selection of the supplemental examiners and proctors, except in cases where the supplemental examiners are approved by ACI Committee C620;
  - B) Verification that the qualifications of the supplemental examiners and proctors conform to the criteria outlined in Section 6.04 through 6.09 of this policy;
  - C) Assuring the secure handling of examination materials;
  - D) Verification of the identity of each examinee, and assuring that the examinees are aware of the certification criteria;
  - E) Verification that the examinees have signed the release statement on the written and performance examinations prior to testing;
  - F) Verification that the performance evaluations are conducted by approved supplemental examiners, and co-signing the performance checklists where appropriate;
  - G) Entering the appropriate grade for the completed performance examination on the checklist report;
  - H) Assuring that all examinees have an opportunity to take a second trial on any failed procedure of the performance examination; and
  - I) Assuring that terms are not defined and examination questions are not interpreted during the course of the written examination.
- 6.11 Examiners or supplemental examiners shall not observe more than one examinee conducting tests at any one time during the performance examination.
- 6.12 Examiners or supplemental examiners monitoring the performance examination for ASTM C 231 shall be qualified for whichever type meter he/she is monitoring.
- 6.13 The examination sessions must be supervised constantly by the examiner, supplemental examiner(s) and/or proctor(s).

## **SECTION 7.0 ACI: DUTIES AND RESPONSIBILITIES**

- 7.01 ACI shall approve the local sponsoring group.
- 7.02 ACI shall authorize the local sponsoring group to conduct examination sessions for CLTT2 certification.
- 7.03 ACI shall approve the examiner.
- 7.04 ACI shall grade the written examinations, review the performance examinations, and notify examinees and the examiner of the final results in writing.
- 7.05 ACI shall certify the examinees who have satisfied the certification requirements.
- 7.06 ACI shall issue certificates and wallet cards to successful examinees.

## **SECTION 8.0 RECERTIFICATION CRITERIA**

Recertification as a CLTT1 or CLTT2 requires successful completion of the certification requirements outlined in Sections 1.0, 2.0 and 3.0 of this policy.