

How to Use This JTA:

For each of the following assessment methods, the Candidate must:

On the written examination:

- **Understand** the following general concepts, which may not have specified values, procedures, or measurements; *and*
- **Know** the following specific procedures or values; performance of these items may also be assessed on the performance examination.

On the performance examination:

- **Perform**—or describe verbally, where allowed—the following tasks or steps, which are part of the specified procedure; knowledge of these items may also be assessed on the written examination.

RESOURCES:

EN 12350-1, *Testing Fresh Concrete Part 1: Sampling and common apparatus*

EN 12350-2, *Testing Fresh Concrete Part 2: Slump Test*

EN 12350-5, *Testing Fresh Concrete Part 5: Flow Table Test*

EN 12350-6, *Testing Fresh Concrete Part 6: Density*

EN 12350-7, *Testing Fresh Concrete Part 7: Air Content – Pressure Methods*

EN 12350-8, *Testing Fresh Concrete Part 8: Self-Compacting Concrete / Slump-Flow Test*

EN 12390-2, *Testing Hardened Concrete Part 2: Making and Curing Specimens for Strength Tests*

EN 12350-1, *Testing Fresh Concrete Part 1: Sampling and common apparatus*

- Understand the scope and significance of use of practice
- Know required common equipment: sizes, shapes of moulds, rod and bar lengths and cross-sections, measuring devices and scoops
- Know and perform (or describe verbally) the transportation and remixing requirements
- Know and perform (or describe verbally) protection of sample
- Know and perform (or describe verbally) the requirements for sample sizes to be used for strength tests, density, air content, temperature, flow table, slump and slump-flow tests
- Know and perform (or describe verbally) sampling procedures for composite and spot samples
- Perform optional temperature measurement
- Know and understand the requirements of the report

EN 12350-2, *Testing fresh concrete Part 2: Slump Test*

- Understand the significance of the test method
- Know the maximum aggregate size for the test method
- Know the applicability of test method for non-plastic concrete
- Know the requirements for obtaining a sample
- Perform the test procedure, including filling of the mould, consolidation, lifting, and measuring as specified within the applicable time limit
- Perform reporting of the slump to the required accuracy

Job Task Analysis (JTA) for ACI-ICT
EN Standards Concrete Field Testing Technician Certification (Continued)

EN 12350-5, *Testing fresh concrete Part 5: Flow Table Test*

- Understand scope of the test method
- Understand the principle of the test method
- Know requirements for obtaining a representative sample
- Know specifics about the flow table, the hollow cone and the tamping bar
- Know procedures used to measure flow retention
- Know and perform the preparation requirements of equipment prior to test
- Know and perform the test procedure, including filling of the mould, strike-off, resting, lifting of cone, and lifting of table
- Know and perform proper raising and dropping of table as specified within the applicable time limit
- Know and perform measurement of diameters
- Know requirements for acceptable test results
- Know the signs of segregation
- Know how to calculate the flow value and accuracy for reporting

EN 12350-6, *Testing fresh concrete Part 6: Density*

- Understand the scope of test method
- Understand calibrated volume of the density (unit weight) container
- Know the requirements for obtaining a sample
- Know and understand the significance of the slump class of the sample as related to requirements for consolidation in the test method
- Perform the test procedure, including tare weight, filling the container, rodding/vibration, strike-off, cleaning, and weighing
- Know and perform the calculation and reporting of density (unit weight) to the specified accuracy

EN 12350-7, *Testing fresh concrete Part 7: Air content – Pressure methods*

- Understand the scope and significance and use of test method
- Know the requirements for the proper working condition of the equipment
- Understand calibration recordkeeping and know how to verify that equipment has been calibrated as required
- Know the requirements for obtaining a sample
- Know and understand the significance of the slump class of the sample as related to requirements for consolidation in the test method
- Know and perform proper procedures for placement and consolidation of sample, including strike-off
- Know and perform preparation procedures and assembly of air meter for test
- Perform test procedure (using Pressure Gauge or Water Column meter), including proper sequence & use of water, valves, pump, and gauge
- Perform reading of the pressure gauge
- Perform the release of pressure and disassembly of air meter
- Know and perform calculation of air content of sample tested

Job Task Analysis (JTA) for ACI-ICT
EN Standards Concrete Field Testing Technician Certification (Continued)

- Know and perform proper use of aggregate correction factor in calculating air content
- Perform reporting of air content to the required accuracy

EN 12350-8, *Testing fresh concrete Part 8: SCC Slump Flow Test*

- Understand scope of the test method
- Understand the Principle of the test method
- Know what t_{500} references
- Know requirements for baseplate
- Know specifics about required equipment
- Know requirements for obtaining a representative sample
- Know and perform the preparation requirements of equipment prior to test
- Know and perform the test procedure, including filling of the mould, strike-off, resting, lifting, and measuring as specified within the applicable time limit
- Know and perform measurement of diameters
- Know requirements for acceptable test results
- Know the signs of segregation
- Know how to calculate the slump-flow
- Know reporting requirements for slump-flow and t_{500}

EN 12390-2, *Testing hardened concrete Part 2: Making and curing specimens for strength testing*

- Understand the scope of practice
- Know the allowable types and sizes of moulds
- Know the testing requirements, including acceptable nominal maximum aggregate sizes
- Know the requirements for obtaining a sample
- Know and understand the significance of the slump class of the sample as related to requirements for consolidation in the test method
- Perform moulding of cube or cylindrical specimen, including placing, consolidation, and finishing
- Know and perform the marking of specimens for identification
- Know and perform (or demonstrate verbally) the requirements for initial storage of specimens
- Know and perform (or demonstrate verbally) the requirements for storage and curing of specimens after demoulding
- Know and understand the requirements of the report