

THE TESTING OF PORTLAND CEMENT CONCRETE

1. In making a slump test:

- a. The cone should be filled in _____ layers.
- b. Each layer should be equal _____ .
- c. Each layer should be rodded _____ times.
- d. The cone should be rapped with a rod _____ times.
- e. The cone (should, should not) be rotated slightly when lifted.
- f. The cone should be raised within _____ to _____ seconds.
- g. In filling the slump cone, one-third of the volume of the mold fills to a depth of _____ inches; two thirds of the volume fills to a depth of _____ inches.

2. The amount of slump, as determined by the slump cone, is calculated by measuring the difference between the height of the mold and the height over the displaced center of the top of the specimen.

True_____ False_____

3. Slump is a good measure of concrete.

- a. Consistency
- b. Flowability
- c. Setting time
- d. None of the above

4. Using the following information, determine the unit weight of a concrete mixture:

Weight of empty bucket	15.62 lbs
Weight of full bucket	52.69 lbs
Volume of bucket	0.33 Cu. Ft.

5. When checking the air content, the Pressure Method AASHTO T-152 is not as reliable as the Chace Indicator AASHTO T-199.

True_____ False_____

6. When checking the air content on structure concrete, the Chace Indicator AASHTO T-199 should be run on the first load and a random load in each four load "lots" thereafter and when test cylinders are made.

True_____ False_____

7. Concrete should have the desired slump before any type of air check is made or before test cylinders are made.

True_____ False_____

8. What is the minimum size sample for preparing test specimens for concrete strength tests? (ASTM C-172)

- a. 0.1 Cu. Ft.
- b. 0.5 Cu. Ft.
- c. 1.0 Cu. Ft.
- d. None of the above.

9. What is the correct method to "perform sampling" (i.e., collect the concrete sample) when the concrete is delivered to a job site by means of a revolving drum mixer truck, or an agitator truck.

- a. Wait until the concrete is in the forms and perform sampling in the forms.
- b. Perform sampling by passing the receptacle through the entire discharge stream, or by diverting the stream completely so that it discharges into a container.
- c. Wait until the concrete is deposited in a bucket and perform sampling in the bucket.
- d. None of the above.

10. The sample should be remixed, (just prior to making the test specimens), protected from the sunlight and wind during the period between taking and using, but in no case when time exceeds:

- a. 5 minutes
- b. 10 minutes
- c. 15 minutes
- d. 30 minutes

11. When curing test cylinders for the first 20 to 24 hours, they must be kept moist and at temperature between:

- a. 40 to 50 deg. F.
- b. 60 to 80 deg. F.
- c. 90 and above
- d. none of the above

12. Test cylinders should be sent to the laboratory for standard curing, within 7 days.

True_____ False_____

13. When test cylinders are being made on a truckload of concrete, what other type test should be run on the same load of concrete?

ANS: _____