Quality tests on cements at construction site (also called field tests on cement) are carried out to know the quality of cement supplied at site. It gives some idea about cement quality based on its basic characteristics like color, touch and feel and other tests.

Tests on Cement at Construction site

The following are the quality tests on cement at construction site:

- Color test
- Presence of lumps
- Adulteration test
- Temperature test
- Float tests
- Strength test
- Setting test
- Date of packing

Color Test of Cement

The color of the cement should be uniform. It should be grey colour with a light greenish shade.

Presence of Lumps

The cement should be free from any hard lumps. Such lumps are formed by the absorption of moisture from the atmosphere. Any bag of cement containing such lumps should be rejected.

Cement Adulteration Test

The cement should feel smooth when touched or rubbed in between fingers. If it is felt rough, it indicates adulteration with sand.
Temperature Test of Cement

If hand is inserted in a bag of cement or heap of cement, it should feel cool and not warm.

Float Test

If a small quantity of cement is thrown in a bucket of water, the particles should float for some time before it sinks.

Setting Test

A thick paste of cement with water is made on a piece of glass plate and it is kept under water for 24 hours. It should set and not crack.

Strength of Cement Test

A block of cement 25 mm ×25 mm and 200 mm long is prepared and it is immersed for 7 days in water. It is then placed on supports 15cm apart and it is loaded with a weight of at 34 kg. The block should not show signs of failure.

The briquettes of a lean mortar (1:6) are made. The size of briquette may be about 75 mm ×25 mm ×12 mm. They are immersed in water for a period of 3 days after drying. If ceme