

Q 1 - A cement bag contains 0.035 cubic meter of cement by volume. How many bags will one tonne of cement comprise?

- (a) 16
- (b) 17
- (c) 18
- (d) 20

Q 2 - Fineness of cement is measured in the units of

- (a) volume / mass
- (b) mass / volume
- (c) area / mass
- (d) mass / area

Q 3 - The initial setting time of cement depends most on

- (A) Tricalcium Aluminate
- (B) Tricalcium Silicate
- (C) Tricalcium Aluminoferrite
- (D) Dicalcium Silicate

Q 4 - Gypsum is added into the raw materials during manufacture of cement so that the final product exhibits

- (a) retarded initial setting time
- (b) improved mouldability for cornices, etc.
- (c) increased compressive strength
- (d) augmented bond strength

Q 5 - Soundness test of cement is carried out to determine its

- (A) Alumina Content
- (B) Iron Oxide Content
- (C) Free Lime Content
- (D) Durability Under Sea Water

Q 6 - Which compound of cement is responsible for strength of cement?

- (a) Magnesium oxide
- (b) Silica
- (c) Alumina
- (d) Calcium sulphate

Q 7 - Consider the following statements regarding 'setting of cement:

- (a) Ordinary Portland
- (b) High Alumina
- (c) Low-heat Portland
- (d) Portland Pozzollona

Q 8 - One bag of Portland cement, 50 kg in weight, would normally have a bulk volume of

- (a) 30 l
- (b) 35 l
- (c) 40 l
- (d) 45 l

Q 9 - Consider the following forms of water in a hydrated cement paste:

1. Capillary water
2. Chemically combined water
3. Interlayer water
4. Adsorbed water

Which of the above forms of water will, on its/their removal, cause shrinkage of the paste?

- (a) 1, 2 and 3
- (b) 1, 2 and 4
- (c) 2, 3 and 4
- (d) 1, 3 and 4

Q 10 - Consider the following statements: High early strength of cement is obtained as a result of

1. Fine grinding.
2. Decreasing the lime content.
3. Burning at higher temperature.
4. Increasing the quantity of gypsum.

Which of the above statements are correct?

- (a) 1 and 2
- (b) 1 and 3

(c) 2 and 3      (d) 3 and 4

**Q 11 - Assertion (A) :** Use of cement lime mortar is generally preferred to cement mortar

**Reason (R) :** Cement –lime mortar has higher workability and water retentivity characteristic than cement mortar

**Q 12 - Assertion (A):** The higher percentage of tricalcium silicate in cement results in rapid hardening with an early gain in strength at a higher heat of hydration.

**Reason (R) :** A higher percentage of dicalcium silicate in cement results in slow hardening and less heat of hydration and greater resistance to chemical attack

**Q 13 - Assertion (A) :** Low heat Portland cement is used in dam construction.

**Reason (R):** Low heat Portland cement attains higher 28 days' strength than ordinary Portland cements.