

S.B. Roll No.....

CONCRETE TECHNOLOGY
4TH Exam/Civil/0512/June'2015

Duration-3hrs

M.Marks=75

Section –A

Q -1-Fill in the blanks

15

- a) During hydration of cement-----reacts first with water.
- b) Proper grading of aggregate-----workability of concrete.
- c) The appearance of water on the surface of freshly laid concrete is called-----
- d) Final setting time of ordinary Portland cement is-----
- e) Slump of concrete is measured in-----
- f) The process of keeping the concrete surface damp for some period is called-----
- g) In fineness test the residue on IS sieve no-9 should not be more than-----
- h) Gypsum is added in cement for -----
- i) Bulking of sand is ----- with fine sand.
- j) Shape of the coarse aggregate in cement concrete should be-----

State True or False

- a) Strength of concrete decreases with age.
- b) Greater the water cement ratio greater will be the strength of concrete.
- c) Strength of cement decreases when it comes in contact with moisture.
- d) No water should be lost during transportation of concrete.
- e) Smoother the aggregate surface better is the bond strength.

Section –B

Q2. Attempt any six questions

5X6=30

- I. What do you mean by hydration of cement? Which compound of cement is responsible for development of early strength?
- II. What do you mean by batching? What are the different methods of batching?
- III. Explain various types of cement. Where is each type used ?
- IV. State the function of water in the concrete? What is the requirement of water for mixing concrete?
- V. What are the various types of concrete mixers commonly used? Explain in detail?
- VI. What is formwork ? What are the essential requirement of good formwork?
- VII. What is curing of concrete? What are the different methods of curing of concrete?

Section –C

Attempt any three Questions: -

10X3=30

- Q3. What are the different methods of compacting concrete? Explain various types of vibrators commonly used for this purpose.
- Q4. What are the various factors affecting the properties of hardened concrete? Explain in detail.
- Q5. What do you mean by workability? Describe compacting factor test.
- Q6. Write short notes on-
 - a) Bulking of sand b) Non destructive test c) Segregation d)concreting in hot weather