

P P SAVANI UNIVERSITY

Forth Semester of B. Tech. Examination

Nov-Dec 2021

SECV2110 Concrete Technology

14.12.2021, Tuesday

Time: 12:30 p.m. To 03:00 p.m.

Maximum Marks: 60

Instructions:

1. The question paper comprises of two sections.
2. Section I and II must be attempted in separate answer sheets.
3. Make suitable assumptions and draw neat figures wherever required.
4. Use of scientific calculator is allowed.

SECTION - I

- Q - 1** Answer the Following: (Any Five) [05]
- (i) List out any six types of the cement.
 - (ii) Define admixture.
 - (iii) Where we can use high strength cement?
 - (iv) List out various tests for the aggregate.
 - (v) Retarders use for _____.
 - (vi) Which code use for concrete mic design?
 - (vii) Define workability of concrete.
- Q - 2 (a)** Explain cement manufacturing process with diagram. [05]
- Q - 2 (b)** Short Note: Soundness test of cement [05]

OR

- Q - 2 (a)** List out Bough's compound and explain function of each compounds. [05]
- Q - 2 (b)** What is admixture? Give any three examples of mineral admixture and two example of chemical admixture. [05]
- Q - 3 (a)** Explain significance of quality control in concrete structure. [05]
- Q - 3 (b)** List out factor's affecting workability of concrete. [05]

OR

- Q - 3 (a)** Discuss about Importance of curing. Also state standard time for curing for different structural member's as per IS code. [05]
- Q - 3 (b)** Short note: Concrete mix design [05]
- Q - 4** Attempt any one. [05]
- (i) Short note: Hydration of silicates
 - (ii) Give classification of aggregates.

SECTION - II

- Q - 1** Answer the Following: (Any Five) [05]
- (i) List out various engineering properties of concrete
 - (ii) What is creep of concrete?
 - (iii) What is shrinkage of concrete?
 - (iv) What is durability of concrete?
 - (v) What is a difference between high strength and high performance of concrete?
 - (vi) What is an advantage of self-compacting concrete?
 - (vii) Light weight concrete is used for _____.
- Q - 2 (a)** Explain Compressive strength test in detail. [05]
- Q - 2 (b)** What are the parameters affects on shrinkage of concrete? [05]

OR

- Q - 2 (a)** Explain split tensile test in detail [05]
- Q - 2 (b)** Define shrinkage of concrete. What are the parameters affects on it? [05]
- Q - 3 (a)** What are the various durability issues in concrete? Explain in detail. [05]

Q - 3 (b) Explain significance of quality control in concrete structure. [05]

OR

Q - 3 (a) Discuss about Importance of curing. Also state standard time for curing for different structural member's as per IS code. [05]

Q - 3 (b) What is a relation between durability and permeability? Explain in detail. [05]

Q - 4 Attempt any one. [05]

(i) Short note on Self-compacting concrete.

(ii) Mass concrete
