



VII SEMESTER B.TECH. (CIVIL ENGINEERING)

END SEMESTER EXAMINATIONS, NOV/DEC 2018

SUBJECT: RECENT ADVANCES IN CONCRETE TECHNOLOGY [CIE 4003]

REVISED CREDIT SYSTEM

(01/12 /2018)

Time: 3 Hours

MAX. MARKS: 50

Instructions to Candidates:

- ❖ Answer ALL the questions.
- ❖ Missing data may be suitably assumed.

Q.No		M	CO
1A.	Explain the stress strain behavior of concrete with the help of a neat sketch	4	1
1B.	What is creep of concrete? Explain its phenomenon. Discuss the ill effects of creep giving any two relevant examples. "Unlike shrinkage creep has beneficial effects too", justify.	6	2
2A.	Discuss the important features of advances in concrete technology.	3	1
2B.	What is no-fines concrete? Discuss the factors to be considered for producing no-fines concrete.	4	4
2C.	With the help of a neat sketch, explain the principle, applications and merits of pull out test.	3	5
3A.	Explain the properties of early age concrete and hardened concrete. List the related tests to determine the same.	5	3
3B.	Explain the need for use of fibers in concrete. Distinguish between reinforced cement concrete and fiber reinforced concrete. How fiber reinforced concrete overcomes the limitations of conventional concrete?	5	4
4A.	Discuss the essential features of self-compacting concrete and the deciding factors to achieve its characteristics.	5	4
4B.	List the various factors that cause corrosion of embedded steel. Describe the mechanism of corrosion.	5	5
5A.	What are the protective measures to prevent the corrosion of embedded steel?	5	5
5B.	Explain the protective measures to prevent the alkali silica reaction	5	5