

1. S.Seetharaman, “*Construction Engineering and Management*”, 4th Edition, Umesh publications, New Delhi, 1999
2. Richard L. SilIster, “*Coastal Engineering Volume I & II*”, Elsevier Publishers, 2000
3. Pera Brunn, “*Port Engineering*”, 1st Edition, Gulf Publishing Company, 2001.

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ADVANCED CONCRETE TECHNOLOGY

Course Code: 13CE 2215	L	P	C
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Course Outcomes:

At the end of the course, the student will be able to:

- CO1 : Discuss the concrete ingredients and its influence at gaining strength.
- CO2 : Design of concrete mix and grade as per IS codes.
- CO3 : Summarise the concepts of conventional concrete and its differences with other concretes like no fines, light weight etc.
- CO4 : Describe the application and use of fibre reinforced concrete.
- CO5 : Design and develop the self compacting and high performance concrete.

UNIT I

Properties of cement, fine aggregate and coarse aggregates, Additives and Admixtures in Concrete, Rheology of Concrete

UNIT – II

Manufacturing and methods of concreting, Properties of fresh and hardened concrete, mix design by I.S. method

UNIT –III

Design and manufacture of normal concrete, Light weight concrete – Cellular concrete – No fines concrete – Aerated & foamed concrete

UNIT – IV

Design and manufacture of fiber reinforced concrete – Polymer concrete – Fly ash concrete

UNIT – V

Design and manufacture of Self compacting concrete – High performance concrete – Very high strength concrete – High density concrete

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TEXT BOOKS

1. Neville, A.M. and Brookes,J.J., “*Concrete Technology*”, 2nd Edition, Pearson Education, 2010.
2. Gambhir, M.L., “*Concrete Technology*”, 2nd Edition, Tata McGraw Hill Publishers, New Delhi, 2009.

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1. Neville, A.M., “*Properties of Concrete*”, 3rd Edition, Longman Scientific and General, 1992.
2. Shanta Kumar,A.R., “*Concrete Technology*”, 2nd Edition, Oxford University Press, New Delhi, 2000.
3. Krishna Raju.N. “*Design of Concrete Mixes*”, 2nd Edition, CBS Publishers and Distributors, 2009.
4. Shetty, M.S., “*Concrete Technology*”, 3rd Edition, S.Chand Publications, 2008.
