Code No: **R31013/R10**

III B.Tech I Semester Supplementary Examinations, November - 2015
CONCRETE TECHNOLOGY
(Civil Engineering)

Time: 3 hours   Max. Marks: 75

Answer any FIVE Questions
All Questions carry equal marks
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1	a)	Explain briefly the setting time tests of cement.	[8]
	b)	Write the advantages of high volume fly ash concrete.	[7]
2	a)	Mention the different tests to be conducted on aggregates and explain in brief impact and crushing tests.	[10]
	b)	Write a short note on uniform, gap and continuous grading of aggregates.	[6]
3	a)	Define workability and write the factors affecting workability.	[12]
	b)	Explain various steps in manufacture of concrete.	[4]
4	a)	Explain gel-space ratio.	[4]
	b)	Explain briefly the maturity concept of concrete.	[8]
	c)	Define shrinkage of concrete.	[4]
5	a)	Write about split tensile strength and flexural strength of concrete.	[8]
	b)	What are the advantages of NDT over destructive tests?	[8]
6	a)	Define creep and explain how creep is measured and also the factors influencing creep.	[12]
	b)	Write about the thermal properties of concrete.	[4]
7		Design a concrete mix of M30 grade. Take standard deviation of 5MPa. The specific gravities of coarse aggregate and fine aggregate are 2.77 and 2.63 respectively. The bulk density of coarse aggregate is 1620kg/cu.m and fineness modulus of fine aggregate is 2.73. Design the concrete mix using IS code method. Assume any missing data suitably.	[16]
8	a)	Write about self consolidated concrete.	[8]
	b)	Write about fibre reinforced concrete and the factors affecting the properties of FRC	[8]

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