Year and Program: **2018-19**	**School of Technology**	**Department of Civil Engineering** (M. Tech. Construction Engineering & Management)
Course Code: **CEM5082**	Course Title: Repair and Rehabilitation of Concrete Structures	**Semester – I**
Day and Date ~~Monday~~ 27-05-2019	**End Semester Examination (ESE)**	Time: Max Marks: 100 2:30 to 5:30 pm

Instructions: 1) All question Compulsory

Q.1	a	What do you mean by deterioration? Explain the mechanism of deterioration in concrete structures?	10	L2	CEM5082.1
	b	Explain the mechanism of corrosion; name the corrosion inhibitors and promoters.	10	L3	CEM5082.2

OR

Q.1	a	What are the various categories of deterioration?	10	L2	CEM5082.1
	b	Write about the embedded metal corrosion and tolerable crack widths to avoid the rebar corrosion.	10	L3	CEM5082.2

Q.2	a	Differentiate non-destructive testing methods and semi-destructive testing methods.	10	L4	CEM5082.3
	b	What are underwater repairs? Mention its special features.	10	L4	CEM5082.4

OR

Q.2	a	Explain the procedure to perform Pull-out test with figure.	10	L4	CEM5082.3
	b	Explain the process of guniting in detail with figure.	10	L4	CEM5082.4

Q.3	a	What is jacketing? What are the different types of jacketing?	10	L4	CEM5082.5
	b	What are the protective surface treatments for structures?	10	L4	CEM5082.5

Q.4	a	Explain the methodology of health monitoring of structures and how is it monitored?	10	L4	CEM5082.6
	b	What are the advantages and disadvantages of smart sensor?	10	L4	CEM5082.6

Q.5	a	Explain base isolation used in structural strengthening	10	L5	CEM5082.5
	b	Explain various smart materials and its application in structural health monitoring system.	10	L4	CEM5082.6

ESE

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