

MASTER OF CONSTRUCTION ENGG. 3RD SEM. EXAMINATION, 2017**SUBJECT : Repair & Retrofitting Technique-I****Time : Three hours****Full Marks 100****PART I****Instructions : Use separate answer scripts for each Group /**

No of Questions		Marks
	Answer any Four questions	
Q1a.	Explain the 'ring anode' or 'halo' effect. Also discuss the repair technique to minimize their effect.	12.5
Q2.	Write a short note on application of Methacrylate flood coat on repair of concrete structure.	12.5
Q3.	Describe the process of application and uses of cementitious grouts in repair of concrete structure.	12.5
Q4a.	What is the role of surface preparation in case of repair of concrete structures?	4.5
Q4b.	Describe the following techniques of surface preparation	08
a)	Grinding	
b)	Water jetting	
Q5a.	Discuss the different epoxy based coating systems	6.5
Q5b.	Discuss the functional requirements of coatings for reinforced concrete structure	6

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Instructions : Use Separate Answer scripts for each Group *Answer Question no- 1 & 2*
Answer any two from Questions from no. 3 to 5.

No of Questions	Questions	Marks
Q1.	Describe Wet Lay Up technique of fibre wrapping technique for RCC member strengthening with different steps. Neat sketch is to be provided explaining every steps	20
Q2.a.	What is passive strengthening? Discuss with examples.	05
Q2.b.	What is Micro concrete and describe it's different aspect of application.	05
Q3.	For proper load transfer between concrete and steel member during plate bonding technique what are the steps followed. Describe those steps with proper sketch. Write a short note on NSMR	10
Q4.	An existing RCC beam is to be strengthened for flexural and shear point of view. Draw a neat sketch showing detailing for providing extra reinforcement.	10
Q5.	Draw a sketch showing strengthening technique of beam column junction with four nos. angle sections and without disturbing existing reinforcement of beam and column. Describe this strengthening technique with all necessary steps of construction.	10