

Roll No. ....

**23424**

**M. Tech. 2nd Semester Civil Engg.  
(Specialisation in Structural Design)  
Examination – December, 2014**

**REPAIRS AND REHABILITATION OF STRUCTURES**

**Paper : MTSD 204**

***Time : Three Hours ]***

***[ Maximum Marks : 100***

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*Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.*

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**Note :** All questions carry equal marks. Attempt *five* questions in all. Assume missing data, if any, suitably

1. (a) Describe investigation and evaluation of distressed structure in detail. 10
- (b) With a flow chart explain the assessment procedure for evaluating a distressed structure. 10
  
2. (a) What do you mean by material testing ? Briefly describe different techniques of testing of distressed structures. 10

- (b) Describe the functional classification and requirement of repair material with different aspects. 10
3. (a) Enumerate the properties and applications of polymer concrete. 10
- (b) With chemical equation explain in detail the mechanism of corrosion. Also explain the different methods of corrosion protection. 10
4. (a) Explain about jacketing and plate bonding techniques in rehabilitation to overcome the low member strength. 10
- (b) What do you mean by shotcreting ? Explain its types and applications. 10
5. (a) Explain different methods of strengthening and stabilizing the concrete structures. 10
- (b) What are the different stress reduction techniques ? Explain in detail. 10
6. (a) Define crack stabilization. What are the methods to repair various types of cracks ? Explain in detail. 10
- (b) With sketches explain to improve the strength of existing columns and beams. 10