

Roll No.

24197

B.Tech 4th Semester (Civil Engineering)

Examination – May, 2013

DESIGN OF CONCRETE STRUCTURES

Paper : CE-206-F

Time : Three hours]

[Maximum Marks : 100

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

Note : Attempt *five* questions in all, selecting at least *one* question from each Unit. Question No. 1 is *compulsory*. All questions carry equal marks.

1. Answer the following questions :

$5 \times 4 = 20$

- (a) Describe inverted flanged beam.
- (b) Discuss spacing of reinforcement.
- (c) Discuss non-rectangular slabs.
- (d) Discuss limit state of crack width.

UNIT- I

2. Explain the design contraction of one way and two way slabs for distributed and concentrated loads. 20

3. (a) Discuss slenderness and vibrations. 10
- (b) Discuss curtailment of reinforcement. 10

UNIT- II

4. Explain design consideration of singly and doubly reinforced rectangular and flanged beams in flexure. 20
5. (a) Explain basic assumption of limit state method. 10
- (b) Discuss min & max reinforcement requirements. 10

UNIT- III

6. (a) Describe spacing of reinforcement. 10
- (b) Describe reinforcement splicing. 10
7. (a) Discuss isolated and well footing. 10
- (b) Discuss control of deflections. 10

UNIT- IV

8. (a) Discuss curtailment of reinforcement. 10
- (b) Discuss serviceability limit state. 10
9. (a) Discuss stiffness. 10
- (b) Discuss shear reinforcement. 10