

Total No. of Questions – [4]

Total No. of Printed Pages – 1/1

G.R. No.

**OCT. 2018 / IN - SEM (T2)**

**F. Y. M. TECH. (CIVIL-Structures) (SEMESTER - I)**

**COURSE NAME:** Critical Review of Design of Concrete Structures **CODE:** CVPB11182  
**(PATTERN 2018)**

Time : [0.5 Hour]

[Max. Marks : 10]

(\*) Instructions to candidates:

- 1) Answer ANY TWO of the three questions
- 2) Figures to the right indicate full marks. Point wise allocated marks are in [ ]
- 3) Use of scientific calculator is allowed
- 4) Use suitable data & draw sketches where ever required

Q1) Draw a labeled sketch and FBD of RCC beam in flexure showing cracks, rebar-to-concrete bond, N.A.-Axis, loads-reaction, and total slip. Explain the rationale of - (i) Mobilized rebar-to-concrete Bond Stress; (ii) Re-distribution of stresses. [5]

Q2) Discuss with sketch the flexure failure case of the RCC raft slab discussed in class. [5]

Q3) Inspect the figure below and report your observations and interpretations. [5]

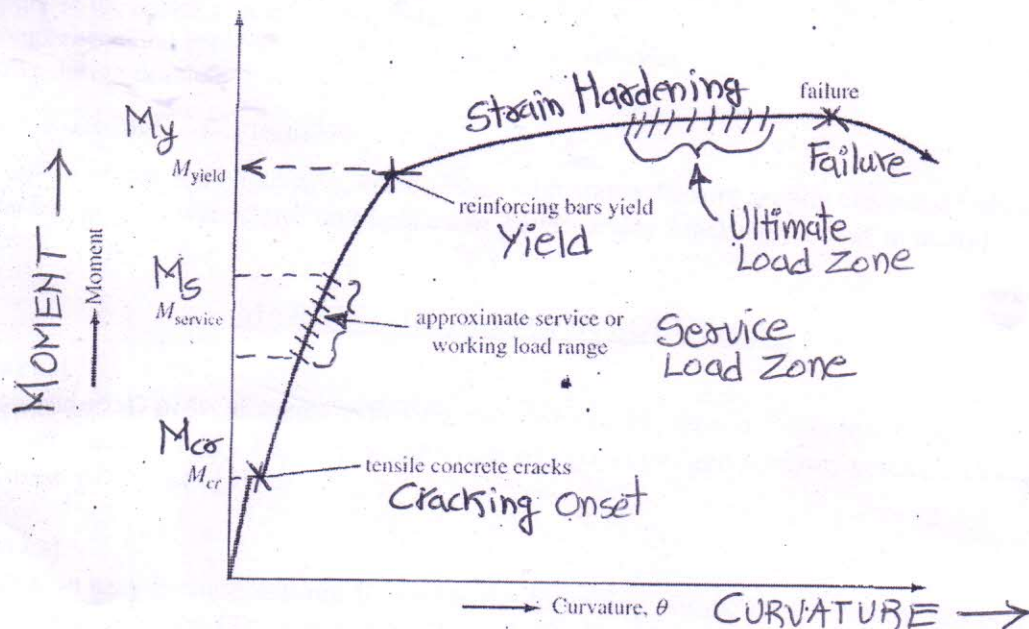


FIGURE ■ Moment-curvature diagram for reinforced concrete beam with tensile reinforcing only.

Q4) Explain with figures the Bare Bar and Embedded Bar Effects in RCC section. [5]