Printed Pages :2

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AR-503

(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID : 181503

Roll No. | | | | | | | | | | |

B. Arch. (SEMESTER-V)

THEORY EXAMINATION, 2015

ARCHITECTURAL STRUCTURE -V

Time : 3 Hours] *[Total Marks : 50*

Note:
- IS code 456:200 is allowed.
- Assume any missing data.
- All questions carry equal marks.

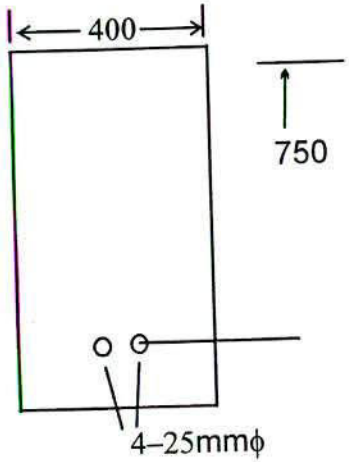
1. (a) Draw and discuss stress and strain variation along the depth of beam in limit state mathod. (LSM).

   (b) Discuss partial safety factors and factored loads.

2. Draw stress block and determine moment of resistance Mu. for beam using (L.S.M.).

3. Determine the ultimate moment of resistance (Mu) for the beam section shown below.

   use M20 concrete and Fe 250 steel.



4. Design a rectangular singly reinforced beam simply supported on 230mm wide walls on both side. with clear span 6m. Beam has to carry $6\,KN/\mu$ DL and $10\,KN/\mu$. LL in addition to its own DL. use Fe 415 steel.

5. (a) Draw loading pattern diagram for building frame to get max positive moment.

   (b) Draw loading pattern for negative moment in continuous beam.

6. (a) Discuss the concept of prestress, loss of prestress and method of analysis of prestress beam.

   (b) Discuss design of RCC column for pure axial load and draw various types of column reinforcement.

7. Design a two way slab of clear span 5m × 6m using (L.S.M.).

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