Total No. of Pages : 01

Total No. of Questions : 08

## M.Tech.(SE) (Sem.-2) INDUSTRIAL STRUCTURES Subject Code : CE-508 Paper ID : [E1302]

Time: 3 Hrs.

Max. Marks: 100

## **INSTRUCTION TO CANDIDATES :**

- 1. Attempt any FIVE questions out of EIGHT questions.
- 2. Each question carries TWENTY marks.
- 3. Assume data suitably, if not given.
- 1. What are various elements of an Industrial building? Explain any Five with sketches. (20)
- 2. (a) Determine the bursting forces on the bunker and pressure on trough walls for a rectangular steel bunker of length 11m and 6.0m width resting on 8 columns to store material having bulk density of 8kN/m<sup>3</sup> and angle of internal friction = 30°. Take height of hopper = 3m and height of vertical portion = 4.45m. (16)

(b) Explain 'Wind Bracing' with sketch.

(4)

- 3. Write procedure (step wise) for designing an elevated cylindrical tank with conical bottom bringing out the formulas and criteria/codal clauses. (20)
- 4. Give design procedure for various components of pressure vessels. Draw sketches, wherever possible. (20)
- 5. Show with sketch, various components of RCC Chimney. Discuss accessories in brief. (20)
- 6. What are functions of cooling towers? How are these designed? What are the codal provisions for cooling towers? (20)
- 7. Explain with neat sketches the guidelines of Machine Foundations, with reference to structural, constructional & other considerations. (20)
- 8. Write short notes on :
  - a) Design of silos (10)
  - b) Peak wind approach vis-à-vis Mean wind approach (10)

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