

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^3 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)