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

Total No. of Pages : 01

Total No. of Questions : 08

M.Tech. Civil Engg (EL-I) (2016 Batch) (Sem.–2)

INDUSTRIAL STRUCTURES

Subject Code : MTCE-211

Paper ID : [74304]

Time : 3 Hrs. Max. Marks : 100

INSTRUCTION TO CANDIDATES :

1. Attempt any FIVE questions out of EIGHT questions.
2. Each question carries TWENTY marks.

Q1. a) What are the factors that govern the choice of roofs for Industrial Buildings? [10]

b) Draw a typical layout plan for a steel manufacturing industry. Also explain how ventilation can be planned in an industrial building? [10]

Q2. Explain the procedure of design of silo. [20]

Q3. Explain in detail the design steps for Industrial frame. [20]

Q4. Discuss in detail about Transmission line towers. [20]

Q5. Explain step by step procedure in the design of steel dome. Also explain the loads that would be considered in the design. [20]

Q6. Design a Circular elevated Steel water storage tank for a capacity of 2,50,000 Its. The height of the tank bottom above the ground level is 8.7m.The tank is supported over 8 columns and situated at the railway station in Kanpur. [20]

Q7. A self supporting chimney is of effective height equal to 30 m, having its diameter at top equal to 2 m. Design the chimney taking a uniform wind pressure intensity of 1.5 kN/m^2 throughout the height. Assume uniform values of permissible tensile and compressive stresses as 120 N/mm^2 and 90 N/mm^2. [20]

Q8. Write note on :

a) Load buckling of compression element. [10]

b) Sandwich plate construction. [10]