PARUL UNIVERSITY
FACULTY OF ENGINEERING & TECHNOLOGY
M.Tech. Summer 2018 - 19 Examination

Semester: 2   Date: 10/05/2019
Subject Code: 203209182   Time: 10:30am to 1:00pm
Subject Name: Design of High Rise Structures   Total Marks: 60

Instructions:
1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

Q.1	A) List down the different loads and load combinations to be considered for the analysis design of a Steel Chimney.	**(05)**
	B) What are the types of towers? Draw a neat sketch of Transmission Line tower	**(05)**
	C) What are the steps to assign load, material properties and supports in StaadPro?	**(05)**
Q.2	**Answer the following questions**. (Attempt any three) (Each five mark)	**(15)**
	A)Explain in detail the design procedure for steel chimney	
	B)Write a short note on Fire Resistance design Provisions	
	C)Write a short note on Breech Opening and Access Ladder	
	D) What are the design steps for Foundation of Steel Chimney	
Q.3 A)	Explain in detail the stresses coming on the steel chimney**?**	**(07)**
B)	A 80 m height TV tower is to be built in Rajkot where the terrain is of category 2, the diameter of hemispherical disc fixed at the top is 2m, the width of the tower at the top base is 3.5m. Calculate the maximum forces.	**(08)**

<div align="center">OR</div>

B)	For a self-height supporting chimney in Rajkot, of height of 84 m above the foundation, carry out the design for sections X1-X1 and X2-X2 as shown in the figure below, given the following data: Diameter of the cylindrical part = 3 m, Soil type = Medium SBC of soil = 200 kN/m^2. Thickness of fire bricks for lining = 100 mm (the lining is supported throughout the height of the chimney).Topography at site is flat & location of terrain category is 2 class C.	**(08)**
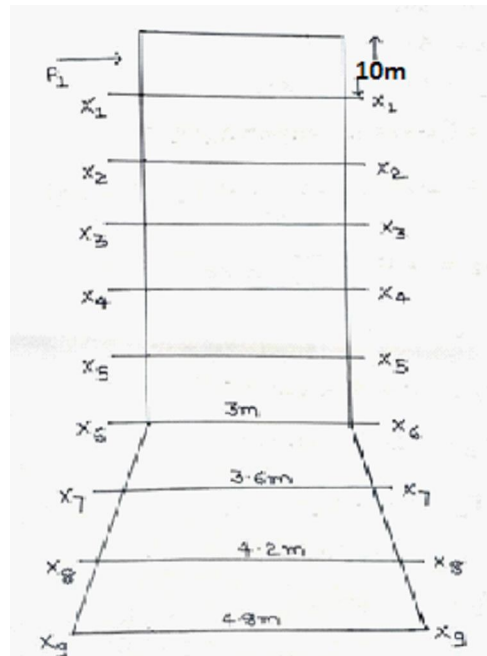
Q.4 A)	Draw neat Sketches for Structural Concept, Configurations and various systems of bracings	**(7)**

<div align="center">OR</div>

A)	Write the structural design considerations for Wind and Seismic loads in Tall Buildings	**(7)**
B)	Explain the design procedure for a tall building?	**(8)**