Reg. No.										

MANIPAL INSTITUTE OF TECHNOLOGY

MANIPAL

A Constituent Institution of Manipal University

VII SEMESTER B.TECH. (CHEMICAL ENGINEERING)

END SEMESTER EXAMINATIONS, DEC 2020

ENVIRONMENTAL IMPACT ASSESSMENT AND MANAGEMENT PLAN [CHE 4005]

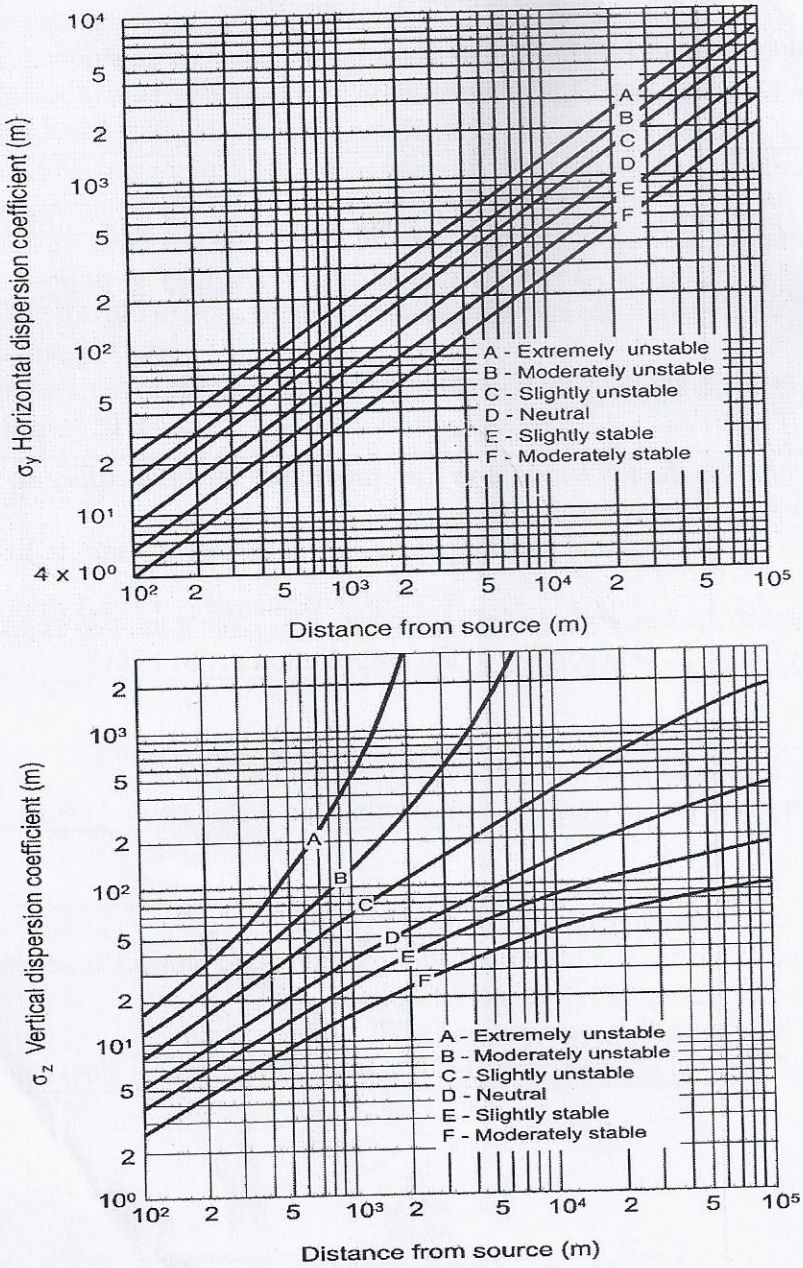
Time: 3 Hours MAX MARKS: 50

Instructions to Candidates:

- Answer **FIVE FULL** questions.
- Missing data may be suitable assumed.

1	a) With a neat flow chart of the EIA process in India by EIA notification 2006.	3
	b) Compare the EIA process of 1994, 2006 and 2020 and discuss the differences.	7
2	a) What are the major environmental problems in India (discuss five problems). Give creative solutions to each.	5
	b) Give an example of an Environmental clearance that is done at district level?	1
	c) Write short notes on the Air Pollution Act, 1981. What are the important functions of the CPCB according to the air pollution act of 1981?	4
3	b) Discuss 2 international treaties in Air pollution mitigation.	5
	c) Write an essay on environmental movements in the world.	5
4	a) Write a short note on ISO 14000	2
	b) What are "Terms of Reference" in Environmental Impact assessment? Who gives the "Terms of reference"? Explain.	2
	c) Explain how is public consultation for EIA done in India?	2
	d) What is Life Cycle Assessment (LCA)? Explain with a neat flow chart	4

5	(a)Write short notes on Environmental Management and tools of Environmental Management. (b)A smelter stack in Delhi is 300 m high and has a plume rise of 100m. It is emitting 5000 g/s of SO_2. Assume stability class is C (Refer chart below) and that wind speed is 3 m/s. A flight path for airport is perpendicular to the plume and 5km downwind of the smelter. The airport safety office has determined that it is unsafe for planes if the planes if the plume concentration > 500 µg/m3. They have also decided that it is unsafe to fly under the plume due to high rise buildings. What is the minimum altitude (in meters) the plane must fly to have an acceptable level of SOx? Assume Gaussian plume and neglect ground reflection of plume. Dispersion coefficient chart is given below.	4 6



Dispersion coefficients for various stability criteria