Reg No.:_____   Name:_____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
SIXTH SEMESTER B. TECH DEGREE(S) EXAMINATION, DECEMBER 2019

Course Code: CE374

Course Name: AIR QUALITY MANAGEMENT

Max. Marks: 100   Duration: 3 Hours

PART A
Answer any 2 full questions, each carries 15 marks
Marks

1	a)	Discuss the effect of air pollutants on human health.	(6)
	b)	Give a classification of the different types of air pollutants based on different criteria with suitable examples.	(6)
	c)	Explain the Sick Building Syndrome.	(3)
2	a)	Discuss the various sources and effects of indoor air pollutants.	(8)
	b)	Differentiate between primary pollutants and secondary pollutants with suitable examples.	(4)
	c)	Briefly explain the major episodes related to air pollution.	(3)
3	a)	Distinguish between particulate matter and aerosols.	(3)
	b)	Explain the formation of photochemical smog and its effects.	(6)
	c)	Discuss the causes and far-reaching consequences of enhanced greenhouse effect.	(6)

PART B
Answer any 2 full questions, each carries 15 marks

4	a)	Explain the various meteorological factors affecting the dispersion of air pollutants.	(3)
	b)	Classify and compare the atmosphere based on different stability conditions.	(6)
	c)	Explain the causes and effects of different types of inversions.	(6)
5	a)	Explain the effect of wind velocity and turbulence in the atmosphere.	(3)
	b)	Discuss the assumptions, advantages and limitations of Guassian Plume model.	(8)
	c)	Explain Pasquill's stability curves.	(4)
6	a)	List the parameters affecting plume rise. Explain how plume rise is estimated.	(5)
	b)	Discuss the various types of plume behaviour with the help of neat sketches.	(10)

PART C
Answer any 2 full questions, each carries 20 marks

7	a)	Discuss the principles to be followed to ensure correct sampling of air pollutants.	(10)
	b)	Explain high volume air sampler.	(10)
8	a)	Describe the equipments used for the control of emission of particulate pollutants.	(15)
	b)	Discuss National Ambient Air Quality Standards.	(5)
9	a)	Describe the various control methods for the removal of gaseous pollutants.	(15)
	b)	Explain the devices used for sampling gases and vapours.	(5)