

CE-311A

Environmental Quality & Pollution

Monitoring Techniques

2023 – 2024 (First Semester)

Lab Schedule_Mars Group

Mars Group-1 and Mars Group-2

Lab Instructions

Time Slot: Wednesday (16.00-17.00 h); Friday (16.00-17.00 h)

Venue: L-20, LHC

Lab Instructions	Date	Topic
1	2.8.23	Environment Introduction
2	4.8.23	Understanding Physical Environment (Part I)
3	9.8.23	Understanding Physical Environment (Part II)
4	11.8.23	Water Quality Quantification
5	16.8.23	Water Characteristics & Quality
		pH
6	18.8.23	Turbidity
		Conductivity
7	23.8.23	Alkalinity (Part I)
8	25.8.23	Alkalinity (Part II)
9	30.8.23	Solids
10	1.9.23	Hardness
11	6.9.23	Chemical Oxygen Demand (COD)
12	8.9.23	Dissolved Oxygen (DO)
13	13.9.23	Bio-chemical Oxygen Demand (BOD)
14	27.9.23	Colorimetry / Spectrophotometry
	29.9.23	Nitrogen (Part I)
15	4.10.23	Nitrogen (Part II)
	4.10.23	Phosphorus
16	6.10.23	Chlorine
17	6.10.23	Chloride
	11.10.23	Fluoride
		Sulphate
18	13.10.23	Microbial Examination (Part I)
19	13.10.23	Microbial Examination (Part II)
20	18.10.23	Microbial Examination (Part III)

Laboratory Sessions

Mars Group-1 // Tuesday (14.00-17.00 h)

Mars Group-2 // Tuesday (15.00-18.00 h)

Venue: WL-116, Environmental Engineering Laboratory, Western Lab

Lab	Date	Part	Activity
1	August 8, 2023	I	Introduction of Environmental Engineering Laboratory
		II	Some General Equipment, Chemicals & Glassware
2	August 19, 2023*	I	Preparations for Analytical Techniques
		II	Taste
		III	Odour
		IV	Colour
3	August 22, 2023	I	pH
		II	Alkalinity
		III	Hardness
4	August 29, 2023	I	Turbidity
		II	Conductivity
		III	Solids
5	September 5, 2023	I	Dissolved Oxygen (DO)
		II	Bio-chemical Oxygen Demand (BOD)
		III	Chemical Oxygen Demand (COD)
6	September 12, 2023	I	Nitrogen
		II	Phosphorus
7	September 26, 2023	I	Chlorine
		II	Chloride
		III	Fluoride
8	October 3, 2023	-	Sulphate
9	October 10, 2023	-	Microbial Examination
10	October 17, 2023	I	Total Carbon (TC) and Total Organic Carbon (TOC) Analyser
		II	Ion Chromatography (IC) and Ion Analysis
		III	Gas Chromatography (GC) & Analysis of Gases and Organics
		IV	Elemental Analyser (CHN/O/S)
11	October 31, 2023	I	Microwave Plasma Atomic Emission Spectrometer (MP-AES)
		II	Inductively Coupled Plasma - Mass Spectrometer (ICP-MS)
		III	High Performance Liquid Chromatograph (HPLC)
		IV	Atomic Absorption Spectrophotometer (AAS)
12	November 7, 2023	I	Automated Weather Monitoring System (AWS)
		II	Determination of Noise Level
13	November 14, 2023	I	High Volume Sampler for Measurement of SPM, RSPM, SO _x & NO _x
		II	Stack Sampling & Gaseous Emission Monitoring

**Lab shifted to Saturday due to Gazetted holidays on regular lab days.*

Time Slot, hrs	Tuesday (Mars)	
	Mars Group 1	Mars Group 2
14.00-15.00	Lab Inst	
15.00-16.00	Lab Practical	Lab Inst
16.00-17.00		Lab Practical
17.00-20.00	Lab Report in the Lab Manual to be submitted on the same day latest by 20.00 hrs	

CE311A: Environmental Quality & Pollution Monitoring Techniques

2023 – 2024 (First Semester)_Mars Group Students

Group: Mars-1; Tuesday; 14.00 - 17.00 hr

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