



1. Syllabus for the post of Senior Scientific Assistant's Examination

Sr. No	Particular	Marks (Total Marks 100)
1	Method for Preservation and Analysis of Water and Wastewater for Temperature, pH, Color, Specific Conductance, Turbidity, Alkalinity, Total Solids, Total Dissolved Solids, Total Suspended Solids, Oil and Grease, Dissolved Oxygen, Biochemical Oxygen Demand, Chemical Oxygen Demand, Chlorides, Calcium, Magnesium and Total Hardness, Sodium and Potassium, Fluoride, Ammoniacal Nitrogen, Total Kjeldahl Nitrogen, Heavy Metals	20 Marks
2	Use, Calibration and Principle of Laminar Air Flow, Incubators, pH Meter, Conductivity Meter, UV Visible Spectrophotometer, Flame Photometer, Gas Chromatograph	15 Marks
3	Toxicity for Fish, Toxicity Factor, Bio assay Test on Fish	5 Marks
4	Washing and Sterilization, Inoculation Techniques, Incubation, Multiple Tube Fermentation Technique for members of coliform group, Membrane Filter Technique for members of Coliform group	5 Marks
5	Quality Control, Quality Assurance and safety measures in Laboratory. Measurement Uncertainty, Z Score, National Accreditation Board for Testing and Calibration Laboratories (NABL), Good Laboratory	10 Marks

	Practices, Preparation of Analysis Report	
6	Ambient Air Quality Monitoring - Criteria Parameters NO _x , SO _x , PM _{2.5} , PM ₁₀	10 Marks
7	Soil Parameters pH, Conductivity, Carbonate, Bicarbonate, Organic Carbon, Sodium, Potash, Phosphorus and Heavy Metals	5 Marks
8	Acid Rain, Global Warming, Ozone Depletion, Green House Gases and Oil Spills	5 Marks
9	Basic concepts of National Environment Policy - 2006, Water (Prevention and Control of Pollution) Act, 1974, Air (prevention and control of pollution) act, 1981 and Environment Protection Act 1986	5 Marks
10	Reasoning and Logic, Basic Mathematics	5 Marks
11	General Knowledge question on State and National issues. Current Events including Politics, Sports, Culture, Literature, Awards, Films, Science, Space Research, Current News, Finance, Budget. Basic question on Constitution of India	15 Marks
10	Reasoning and Logic, Basic Mathematics	5 Marks
11	General Knowledge question on State, National and International issues. Current Events including Politics, Sports, Culture, Literature, Awards, Films, Science, Space Research, Current News, Finance, Budget	15 Marks

Director, GEMI