

Annexure "B"

Marks 120
Time: 02 hours

Syllabus for Field Assistant

	Name of the Subject	Topic Name
a)	Environmental knowledge General	<ul style="list-style-type: none"> • National / International events related to the environment and common understanding of environmental processes, NGT Act, Pollution Indices. • Abiotic and biotic environment. Non-renewable resources. Health hazards due to Environmental Pollution.
b)	Water / Waste Water / Industrial Waste Water Engineering	<ul style="list-style-type: none"> • Estimating sewage discharge, quantity of sewage per capita and its relationship per capita water supplied. design periods. • Unit processes / Operations related to water and waste water treatment, namely Equalization Coagulation; Flocculation; Settling; filtration; Disinfection; Aeration; Adsorption etc. • Physical, chemical and biological characteristics of water and sewage; Activated sludge process and its modifications; treatment ponds and aerated lagoons; Trickling filters; Rotating biological contactors; Sequencing Batch reactor and Membrane Batch Reactor. • Anaerobic digestion; Anaerobic filter and UASB. Nitrification & De-nitrification. • Types of pumps required for pumping sewage such as centrifugal pumps, reciprocating pumps, diaphragm pumps and pneumatic ejectors; Pumping stations – their locations and component parts. • Characteristics and treatment of waste from Textile, Tannery, Dairy, Distillery, Cement Industry.
c)	Water / Waste Water / Industrial Waste Water Analysis	<ul style="list-style-type: none"> • Physical, chemical, and biological characteristics of water, and sewage, performance evaluation of the wastewater treatment system.
d)	Environmental Assessment Impact	<ul style="list-style-type: none"> • Basic concept of Environmental Impact Assessment, Environmental Impact statement, and Environment Management Plan. • Prediction and assessment of impacts on air, water, biota, noise, cultural, and socio-economic environment. • Rapid and comprehensive Environmental Impact Assessment. • Use of GIS in making EIA reports for industries and remote sensing and other software use in EIA studies.
e)	Environmental Legislations in India	<ul style="list-style-type: none"> • Environment (Protection) Act 1986, its amendments, and various rules /notifications made therein. • Environmental Impact Assessment notification, 2006-salient features. • Water (Prevention & Control of Pollution) Act, 1974. Air (Prevention & Control of Pollution) Act 1981.
f)	Environmental Audit and Safety Audit in Industrial units	<ul style="list-style-type: none"> • Environmental Audit and Safety Audit in Industrial units. • On site and off site emergency plan, Disastrous management plan.
