

RSPCB Junior Scientific Officer & JEE 2025 Exam Pattern/ Syllabus

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परीक्षा का पाठ्यक्रम एवं परीक्षा की योजना (Syllabus, Examination Scheme):-

JUNIOR SCIENTIFIC OFFICER (Syllabus & Examination Scheme):-

PART-A

- Environmental General knowledge:
This section will contain questions National/International events related to environment and common understanding of environmental processes, National Green Tribunal Act, 2010, Pollution Indices.

Signature valid

Digitally signed by Sharda Pratap Singh

Designation : Member Secretary

Date: 2025.11.14 17:16:14 IST

Reason: Approved

- Environmental Impact Assessment/Environmental Legislations in India:

Basic concept of Environmental Impact Assessment and Environment Management Plan, Prediction and assessment of impacts on air, water, biota, noise, cultural and socioeconomic environment, Rapid and comprehensive Environmental Impact Assessment.

- Environment (Protection) Act 1986, its amendments and various rules/notification made thereunder, Water (Prevention & Control of Pollution) Act, 1974, Air (Prevention & Control of Pollution) Act, 1981.

- Water/Waste Water/Industrial Waste Water Analysis:

Physical, chemical and biological characteristics of water, waste water and Sewage, performance evaluation of waste water treatment system.

- Air and Noise Pollution:

Sources of air pollution; Properties of air pollutants; Meteorological factors influencing dispersion of air pollutants, Gaussian plume model for dispersion of air pollutants and its application; Effects on human health. Control technology for particulate and gaseous pollutants from industries. Air pollution due to Automobiles and emission control; Principles of measurements and equipment use for major parameters (Water/Air/Noise), Basics of noise pollution, Measurement and management of noise and effects on human beings, Ambient Air Quality standards & Air Quality Index.

- Municipal Solid Waste, Biomedical Waste, E-Waste, Plastic Waste and Hazardous Solid Waste:

Problems associated with Solid Waste viz; municipal, biomedical, hazardous, e-waste, plastic waste etc., its generation, classification, characterization, analysis, treatment, reuse, recycle etc., Risk associated with hazardous waste & its Assessment; Waste Minimization; Priorities in hazardous waste management; hazardous waste treatment.

PART-B

- General Knowledge (with special reference to history, art, culture, traditions, literature, heritage and geography of Rajasthan), Mathematics, reasoning and current affairs.

Examination Scheme:

There will be one paper consisting of two parts having multiple choice type questions. There will be total 75 numbers of questions of 3 marks each. The question paper will be in Hindi and English (Bilingual).

Paper-Subject	No. of questions	Time	Total Marks
PART-A	060	90 Minutes	225
PART-B	015		
Note: -(1) Each Question will carry 3 marks.			
(2) One mark will be deducted for each incorrect answer.			
(3) 40% shall be the pass mark.			

JUNIOR ENVIRONMENTAL ENGINEER (Syllabus Examination Scheme):-

PART-A

- Environmental General Knowledge:

This section will contain questions on National/International events related to environment and common understanding of environmental processes, National Green Tribunal Act, 2010, Pollution Indices.

- Water/Waste Water/Industrial Waste Water Engineering:

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.

Characteristics and treatment of waste water from Textile, Tannery, Dairy, Distillery, Pharmaceutical Industry, Organic Chemical, Vegetable Oil Refinery.

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Reason: Approved

- **Air and Noise Pollution:**
Sources of air pollution; Properties of air pollutants; Meteorological factors influencing dispersion of air pollutants; Gaussian plume model for dispersion of air pollutants and its applications, Effects on human health. Control technology for particulate and gaseous pollutants from industries. Air pollution due to Automobiles and emission control;

Basic of noise pollution, Measurement and management of noise. Permissible noise levels in different zones, Effects of noise on human beings, Ambient Air Quality standards & Air Quality Index.
- **Environmental Impact Assessment/Environmental Legislations in India:**

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 socioeconomic environment; Rapid and comprehensive Environmental Impact Assessment.
- **Environment (Protection) Act 1986, its amendments and various rules/notification made thereunder. Water (Prevention & Control of Pollution) Act, 1974, Air (Prevention & Control of Pollution) Act, 1981.**
- **Municipal Solid Waste, Biomedical Waste, E-Waste, Plastic Waste and Hazardous Solid Waste:**
Problems associated with Solid Waste viz; municipal, biomedical, hazardous, e-waste, plastic waste etc., its generation; classification; characterization; analysis; Onsite Collection Handling, storage Transport and Processing of solid waste; Recovery of Resources, Conversion Products and Energy generation from solid waste. Hazardous waste definition; Risk associated with hazardous waste & its Assessment; Waste Minimization; Priorities in hazardous waste management; hazardous waste treatment.

PART-B

- General Knowledge (with special reference to history, art, culture, traditions, literature, heritage and geography of Rajasthan), Mathematics, reasoning and current affairs.

Examination Scheme:-

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