ANDHRA PRADESH PUBLIC SERVICE COMMISSION::VIJAYAWADA

CORRIGENDUM TO NOTIFICATION NO.15/2023, DATED: 26/12/2023

ASSISTANT ENVIRONMENTAL ENGINEER IN A.P. POLLUTION CONTROL BOARD

(GENERAL RECRUITMENT)

It is herby informed that, the Commission has revised the Scheme and Syllabus for Assistant Environmental Engineer in A.P. Pollution Control Board, based on the objections received from the candidates/applicants and accordingly the following Corrigendum to Notification No.15/2023, Dated: 26/12/2023 is issued.

Scheme *notified as*

Written Examination (Objective Type) Degree standard				
Paper	**Subject**	**No of Questions**	**Duration Minutes**	**Maximum Marks**
Paper-I	General Studies & Mental Ability	150	150	150
Paper-II	Civil or Mechanical or chemical or Environmental Engineering	150	150	150
Paper-III	Common Subject: Environmental Science & Technology	150	150	150
Total				**450**
N.B: As per G.O.Ms. No.235 Finance (HR-1, Plg & Policy) Dept, Dt: 06/12/2016, for each wrong answer will be penalized with 1/3rd of the marks prescribed for the question.				

Scheme read as

Written Examination (Objective Type) Degree standard				
Paper	**Subject**	**No of Questions**	**Duration Minutes**	**Maximum Marks**
Paper-I	General Studies & Mental Ability	150	150	150
Paper-II	Common Subject	150	150	300
Total				**450**
N.B: As per G.O.Ms. No.235 Finance (HR-1, Plg & Policy) Dept, Dt: 06/12/2016, for each wrong answer will be penalized with 1/3rd of the marks prescribed for the question.				

Revised Syllabus for Paper-II is as follows:

PAPER-II: COMMON SUBJECT

1. **ECOSYSTEMS:** Definition, Scope and Importance of ecosystem. Classification, structure and function of an ecosystem, Food chains, food webs and ecological pyramids. Flow of energy, Biogeochemical cycles, Bioaccumulation, Biomagnification, ecosystem value, services and carrying capacity.

2. **NATURAL RESOURCES:** Classification of Resources: Living and Non-Living resources, water resources: use and over utilization of surface and ground water, floods and droughts, Dams: benefits and problems. Mineral resources: use and exploitation, environmental effects of extracting and using mineral resources, Land resources: Forest resources, Energy resources: growing energy needs, renewable and non renewable energy sources, use of alternate energy sources.

3. **BIODIVERSITY AND BIOTIC RESOURCES:** Introduction, Definition, genetic, species and ecosystem diversity. Value of biodiversity; consumptive use, productive use, social, ethical, aesthetic and optional values. India as a mega diversity nation, Hot spots of biodiversity. Field visit. Threats to biodiversity: habitat loss, poaching of wildlife, man- wildlife conflicts; conservation of biodiversity: In-Situ and Ex-situ conservation. National Biodiversity act.

4. **ENGINEERING MATERIALS:** Structure and properties of engineering materials, phase diagrams, heat treatment, stress-strain diagrams for engineering materials.

5. **FLUID MECHANICS AND HYDRAULICS:** Newtonian and non-Newtonian fluids Fluid Properties; Measurement of Pressure Manometers; Fluid Kinematics - Classification of Fluids, Stream function and Velocity potential, Fluid dynamics - Continuity equation, Bernoulli's equations and Impulse momentum equation; Laminar and Turbulent flow through pipes significance of Reynolds number, Hagen Poiseuille's equation, Darcy - Weisbach equation, Friction factor, head losses in pipes, bends and fittings; Dimensional analysis and similarity laws; elementary boundary layer theory.

6. **PROCESS CALCULATIONS AND THERMODYNAMICS:** Laws of conservation of mass and energy, use of tie components; recycle, bypass and purge calculations; degrees of freedom, First & Second law of thermodynamics and their applications; equations of state and thermodynamic properties of real systems.

7. **AIR, WATER, SOIL AND NOISE POLLUTION and CONTROL TECHNOLOGIES:** Classification of pollution, causes, effects and control technologies. Air Pollution: Primary and secondary pollutants, Particulate emission control, Control of SOx and NOx, Automobile and Industrial pollution, Ambient air quality standards. Water pollution: Sources and types of pollution, drinking water quality standards, Wastewater Treatment methods: Primary, secondary and Tertiary, Grit chambers, sedimentation tank, trickling filters, oxidation ponds, activated sludge process, septic tank, disposal of sludge, recycling of waste water. Soil Pollution: Sources and types, Impacts of modern agriculture, degradation of soil. Noise Pollution: Sources and Health hazards, standards.

8. **SOLID AND INDUSTRIAL WASTE MANAGEMENT:** Municipal Solid Waste management, Collection, Segregation and Transport, Solid waste processing technologies, composition and characteristics of e-Waste and its management, Concepts of bioremediation.

9. **GLOBAL ENVIRONMENTAL PROBLEMS, POLICIES AND LEGISLATIONS:** Climate change and impacts on human environment. Ozone depletion and Ozone depleting substances (ODS). Deforestation and desertification. International conventions / Protocols: Earth summit, Kyoto protocol and Montréal Protocol and Paris convention, Indian Environmental Protection Act, Legal aspects Air Act, Water Act, Forest Act, Wild life Act, Municipal solid waste management and handling rules, biomedical waste management and handling rules, hazardous waste management and handling rules.

10. **ENVIRONMENTAL IMPACT ASSESSMENT TOWARDS SUSTAINABLE FUTURE:** EIA structure, methods of baseline data acquisition. Overview on Impacts of air, water, biological and Socio-economical aspects. Strategies for risk assessment, Concepts of Environmental Management Plan (EMP), Concept of Sustainable Development, Population and its explosion, Crazy Consumerism, Environmental Education, Urban Sprawi, Human health, Environmental Ethics, Concept of Green Building, Ecological Foot Print, Life Cycle assessment (LCA), Low carbon life style.

VIJAYAWADA,
DATED: 25/01/2024.

Sd/- J. PRADEEP KUMAR, IRSME.,
SECRETARY.