



PUNJAB PUBLIC SERVICE COMMISSION

BARADARI GARDEN, PATIALA- 147001

WEBSITE : <http://ppsc.gov.in>

PUBLIC NOTICE

RECRUITMENT TO 06 POSTS OF ASSISTANT SCIENTIFIC OFFICER (GROUP-A) AND 03 POSTS OF JUNIOR SCIENTIFIC OFFICER (GROUP-B) IN THE DEPARTMENT OF SCIENCE, TECHNOLOGY AND ENVIRONMENT, GOVERNMENT OF PUNJAB.

1. With reference to advertisement No. 2022107 & 2022109 published on 04.10.2022 for the ibid posts, the commission has decided to revise pattern and the syllabus for the ibid posts.
2. The **revised pattern** for the written competitive examination as mentioned in clause 6.2 of "General Information for the candidates" shall be as follows:

S.No.	Topic	No. of Questions	Marks (Each Question carries 4 marks)	Type of Questions
1.	Questions from the Subject (Part A of Syllabus)	60	240	MCQs (Multiple Choice Questions)
2.	Questions from General Knowledge & Current Affairs (Part B of Syllabus)	40	160	
3.	Questions from General Mental Ability, Logical Reasoning & Quantitative Aptitude (Part C of Syllabus)	10	40	
4.	Punjabi (Part D of Syllabus)	10	40	
Total		120	480	

3. The revised syllabus for the ibid posts is annexed as **Annexure-A**.
4. The Procedure of Selection will remain same as mentioned in Clause 6.1 of the General Information.
5. All other conditions such as reservation of the posts, age, eligibility, essential qualification, etc. of of the advertisement shall remain same as mentioned in "General Information for the Candidates".

Sd/

Secretary (Examinations)
Punjab Public Service Commission
Patiala

Dated : 03/03/2023

SYLLABUS**PART-A (SUBJECT)**

Basic Science: Redox and Complexometric, acid base titrations, Calibrations of volumetric kits, Preparation/standardization of solutions. Basic Knowledge of Electro Chemistry; Electro Chemical reactions, non equilibrium electro chemistry; Ions in solution; Handling of chemical and analysis involving safety and hygiene in the Lab; Determination of errors in Chemical analysis. Knowledge of titrimetric method of analysis involving types of titration, concentration system (Molarity, molality normality mole fraction etc.) Basic knowledge of gravimetric & thermal methods of analysis; Knowledge of Bio-monitoring. Green Chemistry, nanomaterials, photochemistry, thermodynamics, chemical kinetics, synthetic and natural polymers.

Micro-Biology:- General Micro-Biology involving Microscopy and observations of microbes, characteristics and cultivation of Micro-organisms, Microbial growth, control of microorganisms, Microbial ecology and Water Microbiology etc.; toxicity testing, toxicity of pesticide/metals.

Environment Pollution and its type:- Basic concept of environment- lithosphere, hydrosphere, atmosphere and biosphere. Cause, Effects and control measures of Air Pollution, Water Pollution, Soil Pollution, Marine Pollution, Noise Pollution, Thermal Pollution and Microbial Pollution. Disaster Management floods, earthquake, cyclone and landslides.

Climate Change:- Carbon trading, Montreal Protocol, Kyoto Protocol, Carbon Credits, Role and Functions of IPCC, National and International action plan on climate change. Environment convention and protocols, Sustainable development. Precautionary Principle, Polluter pays principle.

Environment Laws:- IFA 1927, WLPA 1972, FCA 1980, Biological Diversity Act 2002, Forest Rights Act, 2006. Strategies for conservation-project Tiger, Elephant, Rhino, Snow leopard Water Act 1974, Environment (Protection) Act, 1986, Coastal Zone regulations, Legal Framework on Air Pollution Air Act, 1981, National Green Tribunal and Environment Impact Assessment.

Mathematical Science:- Measures of central tendency: Mean, Median and Mode, Statistical methods; mean deviation; standard deviations, type of errors, uncertainty, precision and knowledge of statistically evaluation of data.

Instrumentation and Chemical Analysis: pH, conductivity, turbidity, dissolved oxygen, Bio-Chemical Oxygen Demand, Chemical Oxygen Demand measurements technique, Spectroscopy (UV-Visible, infrared, NMR and mass), Ion chromatography & Ion selective electrode measurement technique, Emission and Atomic Absorption spectroscopy, Solid Phase extraction techniques, Chromatographic analysis (Gas Chromatography and HPLC), Industrial Process Analyzers, Air Pollution Control and Emission measurement techniques.

PART-B

General Knowledge & Current affairs

General Knowledge and Current affairs of National and International importance including:

- (i) Economic issues
- (ii) Polity issues
- (iii) Environment issues
- (iv) Geography
- (v) Science and Technology
- (vi) Any other current issues
- (vii) (a) History of India with special reference to Indian freedom struggle movement
(b) History of Punjab- 14th century onwards

PART-C

General Mental Ability, Logical Reasoning & Quantitative Aptitude

- (i) Logical reasoning, analytical and mental ability, etc.
- (ii) Basic numerical skills, numbers, magnitudes, percentage, numerical relation appreciation, etc.
- (iii) Data analysis, Graphic presentation charts, tables, spreadsheets, etc.

PART-D (PUNJABI)

1. ਬਹੁਅਰਥਕ ਸ਼ਬਦ, ਵਿਰੋਧਾਰਥਕ ਸ਼ਬਦ, ਸਮਾਨਾਰਥਕ ਸ਼ਬਦ ਅਤੇ ਬਹੁਤੇ ਸ਼ਬਦਾਂ ਦੀ ਥਾਂ ਇੱਕ ਸ਼ਬਦ।
2. ਪੰਜਾਬੀ ਅਖਾਣ ਅਤੇ ਮੁਹਾਵਰੇ।
3. ਸ਼ੁੱਧ ਅਸ਼ੁੱਧ, ਸ਼ਬਦਜੋੜ।
4. ਸ਼ਬਦ ਦੇ ਭੇਦ।
5. ਅਗੇਤਰ/ਪਿਛੇਤਰ।
6. ਲਿੰਗ ਅਤੇ ਵਚਨ ਬਦਲੋ।
7. ਵਿਸ਼ਰਾਮ ਚਿੰਨ।
8. ਵਿਆਕਰਨ।
9. ਅੰਗਰੇਜ਼ੀ ਸ਼ਬਦਾਂ ਅਤੇ ਵਾਕਾਂ ਦਾ ਪੰਜਾਬੀ ਵਿੱਚ ਸ਼ੁੱਧ ਰੂਪ।
10. ਅੰਕਾਂ, ਮਹੀਨੇ, ਦਿਨਾਂ ਦਾ ਸ਼ੁੱਧ ਪੰਜਾਬੀ ਰੂਪ।
11. ਭਾਸ਼ਾ ਅਤੇ ਪੰਜਾਬੀ ਭਾਸ਼ਾ।
12. ਸ਼ਬਦ ਬੋਧ।
13. ਪੰਜਾਬ ਦੇ ਇਤਿਹਾਸ ਨਾਲ ਸਬੰਧਤ ਪ੍ਰਸ਼ਨ।
14. ਪੰਜਾਬ ਦੇ ਮੇਲੇ, ਤਿਉਹਾਰ ਅਤੇ ਸਭਿਆਚਾਰ ਨਾਲ ਸਬੰਧਤ ਪ੍ਰਸ਼ਨ।
15. ਅਣਡਿੱਠੇ ਪੈਰੇ ਵਿਚੋਂ ਪ੍ਰਸ਼ਨ।