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F. No.E-21180-A/10/2023-Estt-DIC-DIC-AN/ Dated May, 2023

To,

All the Print and electronic Media, Andaman and Nicobar Islands, Port Blair.

Sub:-Request to Publish/Broadcast/Coverage of the News items-reg.

Sir/Madam,

Online applications invited for the posts of Industries Promotion Officer (Chemical) and Economic Investigator

Applications have been invited online from the eligible candidates who possess the required educational qualification for the posts of Industries Promotion officer (Chemical) Group-B (NG) and Economic Investigator Group-C in District Industries Centre, A & N Administration. The application in full shape should be uploaded online from 10.05.2023 (11.00 AM) to 10.06.2023 (12.00 Midnight).

The details in respect of vacancy, educational qualification, eligibility criteria and other instructions are available online at the Administration's portal https://erecruitment.andaman.gov.in/crap/ and https://andaman.gov.in, a press release from DIC said.

General Manager
District Industries Centre

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ADDENDUM

This is with reference to the Vacancy Notice published in the https://erecruitment.andaman.gov.in/crap/ on 10/05/2023 for the recruitment of Industries Promotion Officer (Chemical) Group 'B' (NG) and Economic Investigator Group 'C' in the establishment of District Industries Centre, Port Blair.

(a) In the above vacancy notice Level in Pay Matrix of Industries Promotion Officer (Chemical), Group 'B' (NG) and Economic Investigator Group 'C' may be read as follows:

1. Industries Promotion Officer (Chemical) Group 'B' (NG) : Level in Pay Matrix : Level -6 (Rs.35,400-112400).
2. Economic Investigator Group 'C' : Level in Pay Matrix: Level -5 (Rs.29,200- 92,300)

(b) The Syllabus of Industries Promotion Officer (Chemical), Group 'B' (NG) and Economics Investigator, Group 'C' is also uploaded in https://erecruitment.andaman.gov.in/crap/.

General Manager
District Industries Centre

Minutes of the Recruitment Committee meeting held on 12.05.2023 to propose the syllabus for the written examination w.r.t. the Vacancy Notice published on 10.05.2023 for filling of Group B(NG) post of Industries Promotion Officer(Chemical) and Group 'C' post of Economic Investigator in District Industries Centre, A&N Administration.

The 3rd meeting of the Recruitment Committee was held today on 12.05.2023 at 10:00hrs to propose the syllabus for the written examination w.r.t. the Vacancy Notice published on 10.05.2023 for filling of Group 'B'(NG) post of Industries Promotion Officer(Chemical) and Group 'C' post of Economic Investigator in District Industries Centre, A&N Administration.

The following members were present:

1. Head of the Office/DDO - Nodal Officer
2. Industries Promotion Officer - Member
3. Office Superintendent - Member
4. Higher Grade Clerk/Dealing Assistant - Member

After thorough deliberation on the Syllabus for conducting written examination to the post of Industries Promotion Officer (Chemical) and post of Economic Investigator taking consideration of the qualifications as per Recruitment Rule, the committee recommends the Syllabus for the respective posts as below:

'SYLLABUS' for the posts of Industries Promotion Officer(Chemical), Group 'B' Non-Gazetted and Economic Investigator, Group 'C' posts.

A. Name of Post:-Industries Promotion Officer(Chemical)

Sl. No	Subject	No. of Questions(each question Shall carry one mark)	Maximum Marks
I	General Studies (Section-I)	50	50
II	Subject Paper (Section-II)	100	100
Total		150	150

I. **General Studies:- 50-Marks(Equal distribution to all Chapters)**

a. **General Intelligence & Reasoning**:-The test will include questions on similarities and differences, space visualization, problem solving, analysis, judgment, decision making, visual memory, discriminating observation, relationship concepts, figure classification, arithmetical number series, non-verbal series etc. The test will also include questions designed to test the candidate's abilities to deal with abstract ideas and symbols and their relationships, arithmetical computations and other analytical functions.

b. **English Language:** Questions in this test will be set to assess the knowledge of

English Language, its vocabulary, grammar, sentence structure, synonyms, antonyms etc. There may also be questions based on comprehension of a passage.

c. **General Awareness:** Questions will be designed to test the ability of the candidate's general awareness of the environment around him and its application to the society. Questions will also be designed to test knowledge of current affairs, observations/experience and elementary knowledge of computers. The test will also include questions relating to India and other countries especially, pertaining to History, Culture, Geography, Economics, Science, General Politics and Scientific Research etc.

II. Subject Paper(Degree/Diploma Level)

Maximum Marks on Subject: 100-Marks(Equal distribution to all Chapters)

Subjects as per RR: Degree/Diploma in Chemical Engineering.

1. Engineering Mathematics:

Linear Algebra: Matrix algebra, Systems of linear equations, Eigen values and eigenvectors.
Calculus: Functions of single variable, Limit, continuity and differentiability, Taylor series, Mean value theorems, Evaluation of definite and improper integrals, Partial derivatives, Total derivative, Maxima and minima, Gradient, Divergence and Curl, Vector identities, Directional derivatives, Line, Surface and Volume integrals, Stokes, Gauss and Green's theorems.
Differential Equations: First order equations (linear and nonlinear), Higher order linear differential equations with constant coefficients, Cauchy's and Euler's equations, Initial and boundary value problems, Laplace transforms, Solutions of one-dimensional heat and wave equations and Laplace equation.
Complex Variables: Complex number, polar form of complex number, triangle inequality.
Probability and Statistics: Definitions of probability and sampling theorems, Conditional probability, Mean, median, mode and standard deviation, Random variables, Poisson, Normal and Binomial distributions, Linear regression analysis.
Numerical Methods: Numerical solutions of linear and non-linear algebraic equations. Integration by trapezoidal and Simpson's rule. Single and multi-step methods for numerical solution of differential equations.

2. Process Calculations and Thermodynamics:

Steady and unsteady state mass and energy balances including multiphase, multi-component, reacting and non-reacting systems. Use of tie components; recycle, bypass and purge calculations; Gibb's phase rule and degree of freedom analysis.
First and Second laws of thermodynamics. Applications of first law to close and open systems. Second law and Entropy. Thermodynamic properties of pure substances: Equation of State and residual properties, properties of mixtures: partial molar properties,

fugacity, excess properties and activity coefficients; phase equilibria: predicting VLE of systems; chemical reaction equilibrium.

3. Fluid Mechanics and Mechanical Operations:

Fluid statics, surface tension, Newtonian and non-Newtonian fluids, transport properties, shell balances including differential form of Bernoulli equation and energy balance, equation of continuity, equation of motion, equation of mechanical energy, Macroscopic friction factors, dimensional analysis and similitude, flow through pipeline systems, velocity profiles, flow meters, pumps and compressors, elementary boundary layer theory, flow past immersed bodies including packed and fluidized beds, Turbulent flow: fluctuating velocity, universal velocity profile and pressure drop.

Particle size and shape, particle size distribution, size reduction and classification of solid particles; free and hindered settling; centrifuge and cyclones; thickening and classification, filtration, agitation and mixing; conveying of solids.

4. Heat Transfer:

Equation of energy, steady and unsteady heat conduction, convection and radiation, thermal boundary layer and heat transfer coefficients, boiling, condensation and evaporation; types of heat exchangers and evaporators and their process calculations; design of double pipe, shell and tube heat exchangers, and single and multiple effect evaporators.

5. Mass Transfer:

Fick's laws, molecular diffusion in fluids, mass transfer coefficients, film, penetration and surface renewal theories; momentum, heat and mass transfer analogies; stage-wise and continuous contacting and stage efficiencies; HTU & NTU concepts; design and operation of equipment for distillation, absorption, leaching, liquid-liquid extraction, drying, humidification, dehumidification and adsorption, membrane separations(micro-filtration, ultra-filtration, nano-filtration and reverse osmosis).

6. Chemical Reaction Engineering:

Theories of reaction rates; kinetics of homogeneous reactions, interpretation of kinetic data, single and multiple reactions in ideal reactors, kinetics of enzyme reactions (Michaelis-Mentenand Monod models), non-ideal reactors; residence time distribution, single parameter model; non-isothermal reactors; kinetics of heterogeneous catalytic reactions; diffusion effects in catalysis; rate and performance equations for catalyst deactivation.

7. Instrumentation and Process Control:

Measurement of process variables; sensors and transducers; P&ID equipment symbols; process modelling and linearization, transfer functions and dynamic responses of various systems, systems with inverse response, process reaction curve, controller modes (P, PI, and PID); control valves; transducer dynamics; analysis of closed loop systems including stability, frequency response, controller tuning, cascade and feed forward control.

8. Plant Design and Economics:

Principles of process economics and cost estimation including depreciation and total annualized cost, cost indices, rate of return, payback period, discounted cash flow, optimization in process design and sizing of chemical engineering equipments such as heat exchangers and multistage contactors.

9. Chemical Technology:

Inorganic chemical industries (sulfuric acid, phosphoric acid, chlor-alkali industry), fertilizers (Ammonia, Urea, SSP and TSP); natural products industries (Pulp and Paper, Sugar, Oil, and Fats); petroleum refining and petrochemicals; polymerization industries (polyethylene, polypropylene, PVC and polyester synthetic fibers).

B. Name of the Post:-Economic Investigator

Sl. No	Subject	No. of Questions(each question Shall carry one mark)	Maximum Marks
I	General Studies (Section-I)	50	50
II	Subject Paper (Section-II)	50	50
Total		100	100

I. General Studies:-50-Marks(Equal distribution to all Chapters)

a. **General Intelligence & Reasoning**:-The test will include questions on similarities and differences, space visualization, problem solving, analysis, judgment, decision making, visual memory, discriminating observation, relationship concepts, figure classification, arithmetical number series, non-verbal series etc. The test will also include questions designed to test the candidate's abilities to deal with abstract ideas and symbols and their relationships, arithmetical computations and other analytical functions.

b. **English Language:** Questions in this test will be set to assess the knowledge of English Language, its vocabulary, grammar, sentence structure, synonyms, antonyms etc. There may also be questions based on comprehension of a passage.

c. **General Awareness:** Questions will be designed to test the ability of the candidate's general awareness of the environment around him and its application to the society. Questions will also be designed to test knowledge of current affairs, observations/experience and elementary knowledge of computers. The test will also include questions relating to India and other countries especially, pertaining to History, Culture, Geography, Economics, Science, General Politics and Scientific Research etc.

II. **Subject Paper(Degree Level)**

Maximum Marks on Subject: 50-Marks(Equal distribution to both the subjects)

Subjects as per RR: Degree in Economics/Commerce with Economics/Statistics from a recognized university.

a) Economics (25 Marks-Equal distributions to all Chapters)

1. **Towards Understanding Economics**: Exploring the Subject Matter of Economics-Role of Markets, their Functioning and Welfare-The Households-The Firm and Perfect Market Structure-Introduction to Macroeconomics and National Income Accounting.
2. **Statistical Methods:** Meaning, Classification and Tabulation of Data-Measures of Central Tendency and Partition Values-Measures of Dispersion-Correlation-Regression Analysis.
3. **Microeconomics:** Introduction-Consumer Behavior-Theory of Supply and Production-Theory of Cost-Theory of Revenue and Equilibrium.
4. **Mathematics for Economists:** Preliminaries-Functions of One Real Variable and Limits-Elementary Linear Algebra-Determinants-Matrices and Matrix Operations.
5. **Macroeconomics:** Nature and Scope of Macroeconomics-Employment and Output in a Growing Economy-The Classical System-The Keynesian Model-Money, Interest and Income.
6. **Money and Banking:** Concept of Money and Banking Definition, Functions and Theories of Money-Demand for Money-Money Supply-Central Banking-Conduct of Monetary Policy in India Monetary Policy.
7. **International Economics:** Introduction to International Economics-Theories of International Trade-Alternative Trade Theories-Economic Growth and International Trade-Terms of Trade, Tariff and Protection.
8. **Public Finance:** Role of Government-Taxation-Public Expenditure-Decentralization-Public Debt Management.
9. **Basic Econometrics:** Nature and Scope of Econometrics-Two Variable Regression Analysis-Multiple Regression Analysis-Testing of Hypothesis-Relaxing the Assumptions of the Classical Regression Model.
10. **Indian Economy:** Indian Economy during the Colonial Period-Indian Economy at the time of Independence-Planning in India-Planning and Indian Agriculture-Need for an Inclusive Growth.
11. **History of Economic Thought:** Early Period-Classical Period-Marginalists-J M Keynes and his Contributions-Indian Economic Thought.

b) Commerce: (25 Marks-Equal distributions to all Chapters)

1. **Financial Accounting:** Accounting-Subsidiary Books-Trial Balance-Bank Reconciliation Statement-Final Accounts of Sole Traders-Depreciation Accounting.
2. **Business Organization and Management:** Concept and Forms of Business Organizations-Joint Stock Company -Principles and Functions of Management-Planning and Organizing-Authority, Coordination and control.
3. **Advanced Accountancy:** Accounts of Non - Profit Organisations-Single Entry System-Average Due Date-Partnership Accounts-Hire Purchase Account.
4. **Business Law**: Indian Contract Act, 1872-The Sale of Goods Act, 1930-Negotiable Instruments Act, 1881-Information Technology Act, 2000-Competition Act, 2002 and Consumer Protection Act, 2019-Foreign Exchange Management Act, 1999.
5. **Principle of Costing:** Cost Accounting-Material Control-Labour Cost-Remuneration and Incentives-Overheads-Reconciliation of Cost and Financial Accounts.
6. **Goods and Service Tax**: Concept and types of Indirect Tax-Levy and collection of GST-Registration under GST-Input Tax Credit (ITC)- Administration of GST-Assessment of GST-Accounts & Records.
7. **Business Statistics:** Statistics-Measures of Central Tendency-Measures of Dispersion-Skewness-Simple and Liner Correlation Analysis-Index Numbers-Analysis of Time Series.
8. **Corporate Accounting:** Shares-Underwriting-Final Accounts-Valuation of Goodwill and Shares-Amalgamation, Absorption and Reconstruction-Accounts of Holding Companies-Liquidation.
9. **Management Accounting:** Management Accounting-Financial Statements-Ratio Analysis-Funds Flow Analysis-Cash Flow Analysis-Working Capital Management.
10. **Human Resource Management:** Introduction to Human Resource Management-Acquisition of Human Resources-Employee and Reward Systems-Motivation-Leadership.
11. **Company Law:** Companies Act, 2013- An Introduction-Incorporation of a Company-The Limited Liability Partnership (LLP) Act, 2008-Company Management and Administration-Company Meetings-Winding up of Companies.
12. **Sustainable Development:** Introduction-Sustainable Development Goals (SDGs)-Responsible Production and Mindful Consumption-Responsible Investment.
13. **Income Tax Law and Practice:** Introduction-Income from salaries-Income from House property-Income from Business / Profession-Income from Capital gains-Income from Other Sources.
14. **Money and Financial System:** Money-Finance-Indian Banking System-Process of Credit Creation by Bank-Recent Trends in Banking-The Reserve Bank of India-Functions Instruments of monetary and credit control.

15. **Methods and Techniques of Costing:** Job Costing-Process Costing-Marginal Costing-Standard Costing-Budgetary Control-Software Based Managerial Decision Making.
16. **Fundamental of Financial Management:** Financial Management-Cost of Capital-Capital Budgeting-Management of Working Capital-Dividend Policies.
17. **Fundamental of Investment:** Investment Environment-Analysis of Equity and Debt Instruments-Portfolio Analysis and Financial Derivatives-Investor Protection.
18. **Principles and Practice of Insurance:** Principles of Insurance-Life Insurance-Marine Insurance-Fire Insurance-Marketing of Life Insurance Business.
19. **International Trade and Export Management:** Introduction to International Trade-International Trading Environment-Foreign Trade Policy and Regulation-Export Finance-Export Procedures and Documentation.

The above Syllabus may be forwarded to DBRAIT and also SOVTECH to upload in the Recruitment Portal

(K. Jai Kumar)
IPO
Member

(V. Jyothi)
HGC-OL/LO
Member

(Subir Kumar Sil)
OS
Member

(D. Russel Rose)
HOO/DDO
Nodal Officer

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