**NTDCL Syllabus (Last Date of Application submission 25-03-2024)**

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| **Sr.** | **Part** | **Weightages** | **Details** |
| 1. | General Ability | 17% | Pakistan Studies, Islamic Studies Ethics/Islamic Studies, General Knowledge, Current Affairs |
| 2. | Subject Ability | 83% | Post Relevant /Subject Related |

**Subjective Ability Syllabus**

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| **1. DEPUTY MANAGER (LEGAL)** |

1. Constitution of Pakistan
2. Civil Procedure Code, 1908
3. NEPRA Act 1997, Rules and Regulations
4. PPRA Rules, 2004.
5. Income Tax Ordinance, 2001.
6. Electricity Act, 1910.
7. Labour Laws.
8. Contract Act, 1872
9. Sales of Goods Act, 1930
10. Insurance Ordinance, 2000
11. Negotiable Instruments Act, 1881
12. Rent Laws.
13. Public International Laws
14. Qanoon-e-Shahadat Order, 1984
15. Limitation Act, 1908
16. Specific Relief Act, 1877
17. Transfer of Property Act, 1882
18. The Punjab Civil Courts Ordinance, 1962

## **2. DEPUTY MANAGER (FINANCE)**

1. Companies Act 2017
2. IFRS Introduction plus processes of (IAS 1, IAS 7, IFRS 16)
3. Preparation and Presentation of Financial Statements
4. Cost Volume Profit Analysis, Capital Expenditure Planning and Evaluation
5. Financial Analysis including Ratios, Horizontal Analysis, Vertical Analysis
6. Budgeting Complete and Differential Analysis
7. Nature and Functions of Management
8. Financial Management Decisions, Risk Management
9. PPRA Rules 2004

## **3. DEPUTY MANAGER (recruitment)**

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| 1. **Human Resource Management: 19 MCQs** |
| Principles and Functions of HRM, Recruitment and Selection Process , Training and Development, Performance Management, Compensation and Benefits, Employee Relations, HR Policies and Procedures, Industrial Relations & Labour Laws |
| 1. **Recruitment: 25MCQs** |
| Recruitment Methods and Techniques, Job Analysis and Job Design, Sourcing Strategies, Screening and Short listing Candidates, Interviewing Techniques, Selection Criteria, Legal and Ethical Issues in Recruitment, Recent Developments in Recruitment Practices |
| 1. **General Management: 19 MCQs** |
| Organizational Behavior, Leadership Styles and Theories, Organizational Structure and Design, Strategic Management, Change Management, Decision Making and Problem Solving, Corporate Governance, Business Communication |
| 1. **Computer Literacy: 12 MCQs** |
| Basic Computer Operations, Windows Operating System, Microsoft Office Suite (Word, Excel, PowerPoint, Outlook), Internet and Email Usage, Data Management and Analysis, Basics of ERP-SAP |
| 1. **Numerical and Analytical Skills: 08 MCQs** |
| Basic Math Skills (e.g., percentages, ratios, averages), Data Interpretation, Analytical Reasoning |

## **4 & 10. DEPUTY MANAGER & ASSISTANT MANAGER (PROCUREMENT & CONTRACTS)**

1. **Energy Contracts and Power Purchase Agreements: (13 MCQs)**
   1. Understanding of different types of energy contracts and power purchase agreements.
   2. Knowledge of terms and conditions commonly found in energy contracts.
   3. Familiarity with legal and regulatory aspects related to energy contracts.
2. **Procurement Process:(12 MCQs)**
   1. Knowledge of procurement procedures and practices and PPRA Rules.
   2. Understanding of procurement lifecycle from planning to contract closeout.
   3. Ability to evaluate bids and proposals from Contractors.
   4. Knowledge of hiring of individual consultants as well as consultant firms.
3. **Energy Supply and Equipment Procurement:(13 MCQs)**
   1. Understanding of energy supply sources and equipment used in the transmission and distribution sector.
   2. Knowledge of technical specifications for energy equipment such as transformers, switchgear, etc.
   3. Familiarity with procurement strategies for energy supply and equipment.
4. **Contract Management:(12 MCQs)**
   1. Knowledge of contract management principles and techniques.
   2. Ability to monitor contract performance and ensure compliance with terms and conditions.
   3. Understanding of risk management in contract administration.
   4. Understanding of PEC Contract Documents.
5. **Electrical/Electronics/Mechanical Engineering:(12 MCQs)**
   1. Basics of electrical, electronics, and mechanical engineering principles.
   2. Knowledge of equipment used in energy transmission and distribution systems.
   3. Understanding of technical aspects relevant to the procurement and contract’s role.
6. **Quantitative Aptitude:(04% Weightage)**
   1. Basic arithmetic, algebra, and numerical reasoning skills.
   2. Ability to interpret and analyze numerical data relevant to procurement and contracts.
7. **Verbal and Written Communication: (9 MCQs)**
   1. Proficiency in English language comprehension and usage.
   2. Ability to articulate ideas clearly and effectively in written communication.
   3. Understanding of technical vocabulary related to the energy sector.
8. **Legal and Regulatory Environment: (04 MCQs)**
   1. Knowledge of relevant laws, regulations, and policies governing procurement and contracts in the energy sector.
   2. Understanding of compliance requirements and ethical considerations in procurement activities.
9. **Case Studies and Problem-Solving: (04 MCQs)**
   1. Analytical and problem-solving skills applied to procurement and contract-related scenarios.
   2. Ability to analyze case studies and recommend appropriate courses of action.

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| **5. DEPUTY MANAGER IT (Cyber Security)** |

1. Computer Networking Concepts
2. Computer programming skills
3. Cryptography and VPNs
4. HTTP Protocol, HTTP Cookies, Sessions, Same Origin Policy, Burp Suite
5. Penetration Testing
6. Command line scripting
7. Penetration testing
8. SQL Injection
9. Foot printing and scanning
10. Vulnerability assessment
11. Web application attacks
12. System Attacks
13. Password attacks
14. Buffer Overflow Attacks
15. Forensic Investigation

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| **6. DEPUTY MANAGER IT (DATA SCIENTIST)** |

1. Data Engineering
2. Big data engineering
3. Data Analytics
4. Database management
5. Data mining
6. Predictive analytics
7. Machine learning
8. Data visualization
9. Exploratory data analysis
10. Statistical modeling
11. Machine Learning

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| **7. DEPUTY MANAGER (SYSTEMS)** |

1. Vagrant/ Ansible Open source and proprietary
2. Ports HTTPS SSL etc.
3. Securing your web server
4. Port forwarding
5. SAN
6. Anti-Hacking Techniques
7. Granting File permission
8. RAID
9. Governance
10. Audit Process
11. Network Technology Basics
12. Information Systems Life Cycle
13. System Implantation and Operations
14. Protecting Information Systems
15. Business Continuity and Disaster Recovery
16. Penetration Test
17. System Compliance

## **8. ASSISTANT MANAGER (LEGAL)**

1. Contract Act 1872
2. Companies Act 2017
3. Public Sector Companies (Corporate Governance Rules) 2013
4. State-owned Enterprises Act 2023.
5. Civil Procedure Code, 1908
6. NEPRA Act 1997, Rules and Regulations
7. Land Acquisition Act 1894..
8. Code of Criminal Procedure 1898.
9. Electricity Act, 1910.
10. Pakistan Penal Code 1860.
11. The Industrial Relation Acts 2012

## **9. ASSISTANT MANAGER (RECRUITMENT)**

1. Principles of Management
2. Fundamentals of Business Management
3. Business Communication
4. Public Administration& Management
5. Human Resource Management
6. Training & Development
7. Recruitment & Selection
8. Compensation & Performance Management
9. Strategic Human Resource Management
10. Change Management
11. Organizational Development
12. Corporate Governance
13. Organizational Behavior
14. Industrial Relation & Labor Laws
15. Leadership & Change Management
16. IT in Business (Computer Applications & ERP)
17. Fundamentals of Economics

## **11. ASSISTANT MANAGER (it help desk)**

1. Programming Fundamentals (Variables, Data structures, Control Structures, Exception Handling,

Threading, Files, Socket Programming, Server side programming concepts)

1. Object Oriented Programming (Classes, Objects, Inheritance, Polymorphism, Encapsulation, Abstraction)
2. Data Communication and Computer Networks (Network Types, Topologies, TCP/OSI Layers, Storage)
3. Database Systems (Basic Concepts, Keys, Relationships, DDL/DML, Normalization, SQL, Joins)
4. Operating System Concepts (Basic Concepts, Scheduling Algorithm, Inter process Communication,

Deadlocks, Memory management)

1. Fundamentals of ERP

## **12. ASSISTANT MANAGER (SOFTWARE DEVELOPMENT & OPERATIONS)**

1. Programming Fundamentals
2. Object Oriented Programming
3. Software Development Methodologies
4. Agile Software Development
5. SQL Development
6. Database Systems
7. Database Design & Management
8. Enterprise Application Development
9. Artificial Intelligence
10. Internet Architecture and Protocol
11. Execution of full software development life cycle (SDLC)
12. API
13. Multithreading/Multitasking
14. Classes and objects
15. Exception Handling
16. Connection Pooling