REFERENCE SYLLABUS

For

Refrigeration Plant Operator - Ammonia
Introduction

This Syllabus is intended to assist candidates studying for the Refrigeration Plant Operator Ammonia Examination.

Recommended Study Program:
It is recommended that, before undertaking this examination, the candidate completes Power Engineering Course of study, offered through a recognized and approved technical institute or training provider which addresses the Syllabus Outline.
Reference Syllabus for Refrigeration Plant Operator - Ammonia

**Major Topic: Acts, Regulations, and Codes**
- Topic 1 Boiler and Pressure Vessels Act
- Topic 2 Introduction to Codes for Boilers
- Topic 3 Introduction to Plant Safety
- Topic 4 Refrigeration Plant Safety

**Major Topic: Basic Communication**
- Topic 1 Technical Communications
- Topic 2 Plant Communications

**Major Topic: Elementary Science**
- Topic 1 SI Units
- Topic 2 Basic Arithmetic Operations
- Topic 3 Transposition
- Topic 4 Areas and Volumes of Solids
- Topic 5 Application of Basic Mechanics
- Topic 6 Introduction to Thermodynamics
- Topic 7 Introduction to Matter and Chemistry
- Topic 8 Introduction to Electricity

**Major Topic: Safety**
- Topic 1 Fire Safety and Site Hazards
- Topic 2 Building Safety

**Major Topic: Environmental**
- Topic 1 Gas Detection and Monitoring
- Topic 2 Environmental Impact of Refrigerants
Major Topic: **Principles of Refrigeration**
- Topic 1 Applied Thermodynamics
- Topic 2 Refrigerants
- Topic 3 Basic Refrigeration Cycles

Major Topic: **Refrigeration Equipment and Components**
- Topic 1 Refrigeration Compressors
- Topic 2 Oil Separators
- Topic 3 Compressor Lubrication
- Topic 4 Condensers
- Topic 5 Cooling Towers
- Topic 6 Evaporators
- Topic 7 Metering Devices
- Topic 8 Cooling Coils

Major Topic: **Refrigeration Controls and Instrumentation**
- Topic 1 Fundamentals Measuring Devices
- Topic 2 Basic Operational Controls
- Topic 3 Basic Safety Controls

Major Topic: **Refrigeration System Operation and Maintenance**
- Topic 1 Checks
- Topic 2 Safety Devices and Functions
- Topic 3 Troubleshooting
- Topic 4 Procedures