

Syllabus for Written Test to the post of Jr. Technical Assistant

(MRAC) to Technical Assistant (MRAC)-MFCP

FITTING, SHEET METAL & WELDING

Safety, Safety precautions, First Aids, Personal Protective Equipment (PPE), Fire fittings equipments, Electrical Safety. Fittings Different types of fitting hand tools, power tools Functions, constructions, specifications & application of hand tools and power tools Care and maintenance of hand tool & power tools Machineries and equipments like drilling machines, grinding machines etc. Function, construction, specification, application, care & maintenance of machineries & equipments. Precision measuring instruments like vernier caliper, micrometers, vernier height gauge etc. Functions, constructions, specifications & application of precision instruments Care and maintenance of precision instruments. Sheet metal Welding.

ELECTRICAL

AC Motors, Single phase and Three phase motors, Motor starters, DOL Starter, Star Delta Starter, Contactor, Overload Relay

ELECTRONICS

Electronic Components, Resistors, Capacitor, Diodes, Rectifiers

BASIC REFRIGERATION

Refrigeration tools, instruments and equipments, specification and application of tools Fundamentals of refrigeration, Different types of refrigeration systems, Vapour compression systems, Vapour absorption system, COP, ton of refrigeration

REFRIGERATION EQUIPMENTS

Compressor, types of compressors, working principle, Condenser, Cooling tower, Types of cooling towers, capacity of cooling towers, Expansion valve, Types of expansion valves, Evaporator, Types of evaporators, Oil separator, Drier, Liquid receiver

REFRIGERANT

Types of refrigerants, properties of refrigerant, Ozone depletion layer, green house effect, leak testing, flushing, evacuation, gas charging in different systems.

REFRIGERATION SYSTEM

Refrigerator (direct cool), Frost free refrigerator, Refrigerator (inverter technology), Water cooler & water dispenser, Visible cooler & Bottle cooler, Deep Freezer/ Display cabinet

AIR CONDITIONING SYSTEM

Window air conditioner Split Air- conditioner (Wall Mounted, Floor, Ceiling, Cassette Mounted, Ductable) – Multi split Air – conditioner Inverter split Air conditioner-Installation method.

COMMERCIAL REFRIGERATION AND AIR CONDITIONING SYSTEM

Walk in cooler, Cold storage, Psychrometry, Central Air Conditioning System/HVAC plant Package Air – Conditioner (Air Cooled, Water Cooled condenser), Split package Duct Air filter, Humidifier, Dehumidifier, Thermostat, Humidistat, Temperature and Pressure control.

HOSPITAL AIR CONDITIONING WORKS

Basic knowledge in the operation and maintenance of water cooled chillers, chilled water pumps, condenser pumps, cooling towers Air handling unit, Fan Coil Units, Operation theatre, Intensive care unit air conditioning. Humidity control.


DEPUTY DIRECTOR (ADMIN)