

HVAC ONLINE TRAINING SCHEDULER

Day 1

FUNDAMENTALS

- Introduction To HVAC
- Basics & Importance Of HVAC
- Scope And Future Advancements In HVAC
- Standards & Codes Used In HVAC
- Units & Unit Conversion
- Basics Of Heat
- Study On Psychrometry

Day 2

REFRIGERATION CYCLE

- Vapour Compression Cycle
- Vapour Absorption Cycle

Day 3

COMPONENTS OF AC SYSTEM

- Evaporator
- Compressor
- Condenser
- Expansion Valve
- Filter
- Fan
- Control System
- CDP

Day 04

STUDY ON REFRIGERANTS

- Freon Series & Non Freon Series Refrigerants
- Properties Of Refrigerants
- Azeotropic And Zeotropic Blends
- Brines
- Ozone Depletion Potential

Day 05

GAS CHARGING PROCEDURES

- Evacuation
- Gas Charging
- Pump Down
- Equipments Used For Gas Charging
- Refrigerent Piping
- Refrigerent Pipe Joining Methods
- Refrigerent Pipe Insulation And Insulation Materials
- Refrigerent Pipe Sizing

HVAC ONLINE TRAINING SCHEDULER

Day 06

CLASSIFICATION OF AC SYSTEM

- Non Centralized AC System
- Centralized AC System
- Heat Pumps And Boilers

Day 07

CHILLER SYSTEM BASICS

- Types Of Chiller System
- AHU & FCU Classification

Day 08

AIR DISTRIBUTION SYSTEM

- FAN (Fan laws, Types of fans, Selection of fan)
- Duct Designing Methods (Equal friction method, Velocity reduction method, static regain method)
- Ducting Material Selection
- Duct Insulation Material (Thermal insulation, Acoustic insulation, Under deck insulation)
- Sheet Metal Calculation
- Duct Fabrication
- Duct Work Rules
- Air Terminal Units (Grills, Diffusers, Louvers, Dampers, Disc valve etc.)

Day 09

SMACNA Standards

Day 10

VENTILATION SYSTEM

- Parking Area Ventilation System
- Toilet Area Ventilation System
- Kitchen Hood Area Ventilation System

Day 11

HEAT LOAD CALCULATION

- E-20 Manual Load Calculation
- Ventilation And Infiltration Load Calculation

HVAC ONLINE TRAINING SCHEDULER

Day 12

CHILLER SELECTION DESIGN

- Chiller Pipe Sizing
- Hydraulic Head Calculations
- Valves And Fittings Used In Chiller System
- Types Of Pumps And Pump Selection

Day 13

COOLING TOWER SELECTION

- Types Of Cooling Tower And Its Selection
- Make Up Water Calculation

Day 14

SOFTWARES

- Heat Load Calculation - Hourly Analysis Programme(hap),e-20 Excel Sheet
- DUCT DESIGNIG -Mcquay DUCT SIZER & DUCT CHECKER
- CHILLER PIPE SIZING - Mcquay PIPE SIZER
- Air Terminal Selection -Beta Programme
- Psychrometry - Carrier,trane Pscyrometric Softwares
- Unit Conversion - Converter

Day 15- Day 21 –DRAWINGS

Day 15

PARKING AREA VENTILATION DRAWING

Day 16

TOILET AREA VENTILAION

Day 17

KITCHEN HOOD VENTILATION

Day 18

DUCTED AC INSTALLATION WITH Y JOINT PRACTICING DRAWING

Day 19

MINI PROJECT(HEAT LOAD CALCULATION IN A COMMERCIAL BUILDING)

Day 20

MINI PROJECT(AC LAYOUT DESIGN IN A COMMERCIAL BUILDING)

Day 21

MAIN PROJECT(CHILLER SYSTEM DESIGNING IN COMMERCIAL BUILDING)

ELECTRICAL ONLINE TRAINING SCHEDULER

Day 1

INTRODUCTION TO ELECTRICAL DESIGNING

- Importance of mep designing in building services
- Energy Scenario
- Supply System

Day 2

BASIC TERMS AND DEFINITIONS

- Voltage and Current
- Power Factor
- Basic Formulas Set 1

Day 3

PROTECTION DEVICES BELOW 100 AMPS

- Miniature Circuit Breaker
- Isolators
- Residual Current Circuit Breakers
- Residual Current Breaker with overload protection

Day 04

DISTRIBUTION BOARDS

- Horizontal Distribution Board
- Vertical Distribution Board

Day 05

SUB CIRCUITS AND LOAD BALANCING

- Light & Fan SubCircuit
- Power SubCircuit
- General Rules & Regulations

ELECTRICAL ONLINE TRAINING SCHEDULER

Day 06

PROJECT BASED ON LOAD BELOW 100kVA

- Load Balancing
- Single Diagram Preparation of Distribution Board
- Basic Loads and Civil Plan

Day 07 & Day 08

SELECTION OF TRANSFORMERS & DIESEL GENERATORS

- Transformer Working Principle
- Transformer Selection
- Transformer Winding Details
- Transformer Tap Changing
- Type Of cooling
- Selection of transformer
- Diesel Generator Selection
- Assignment 1

Day 09 & Day 10

SELECTION OF CABLES & PROTECTION DEVICES

- LT Cable selection (AYFY)
- Cable Voltage Drop Calculations
- Moulded Case Circuit Breakers
- Air Circuit Breakers
- Isolatos
- Switch Disconnecter Fuse
- Selection of protection devices based on load
- Assignment 2

Day 11 & Day 19

PHYSICAL LAYOUT OF PANEL BOARDS & PROJECT BASED ON UNIT LOAD

- **Panel Layout**
- Design of Panel based on load given
- SLD preparation of panel boards
- Assignment 3

ELECTRICAL ONLINE TRAINING SCHEDULER

Day 12 & Day 13

MSB DESIGN AND TYPES OF PANEL BOARD

- MSB Design based on transformer selected
- Protective equipments of Transformers
- Measuring Equipments of transformers
- Voltmeters, Ammeters, PowerFactor Meters, Indication system
- Current Transformers
- Diffrent Panel Boards
- Lift Control Panel, Pump Control Panel, APFC Panel, Motor Control Panel
- Generator Control Panel
- Generatior protection and measuring equipments
- Assignment 4

Day 14 & Day 15

INTERCONNECTION METHODS & FUSE GRADING [RULES FOR PANEL DESIGNING]

- Castle Key Interlock
- Change Over Switch
- AMF Panel
- General Rules for Panel Designing

Day 16

Basics of MEP services

Day 17

Classifications Of AC Loads

Day 18 & Day 20

HT SIDE DESIGNING,FAULT ANALYSIS & EARTHING DESIGN - PROJECT BELOW 2000KVA

Day 21

Doubt Clearance Sessions and Project analysis

PLUMBING ONLINE TRAINING SCHEDULER

Day 1

FUNDAMENTALS

- Definition Of Plumbing
- Plumbing Hydraulics

Day 2

WATER SOURCES

- Water Resources
- Water Quality

Day 3

WATER SUPPLY SYSTEM

- Supply Of Water
- Water Requirement Calculation
- Water Storage
 - a) Tanks
 - b) Reservoirs
 - c) Surface reservoir
 - d) Elevated reservoir
- Pumps And Pumping System

Day 04

UNDER GROUND SUMP TANK DESIGNING

- Design & Drafting based on a project

Day 05

OVER HEAD TANK DESIGNING

- Design & Drafting based on a project

PLUMBING ONLINE TRAINING SCHEDULER

Day 06

FIXTURES, FIXTURE UNITS

- Material
- Friction factor, pressure, flow rate, fixture units
- Fixture placing detailing

Day 07

TYPICAL FLOOR PLAN-PLUMBING LAYOUT

Day 08

PIPE SIZING

- Cold water supply pipe sizing
- Hot water supply pipe sizing
- Fittings & Valves

Day 09

WATER DISTRIBUTION SYSTEM

- Dead End System
- Grid iron System
- Radial system
- Ring Main System

Day 10

DRAINAGE AND WASTE WATER DISPOSAL

- Traps
- Single stack system
- Double stack system
- Vent pipe system

Day 11

TOILET DETAILING

- Design
- Mounting height
- Spacing fixtures
- Plan & Section

PLUMBING ONLINE TRAINING SCHEDULER

Day 12

TOILET PLAN & ELEVATIONS

- Enlarged Toilet-Plumbing Layout
- Toilet Fixtures Mounting Details

Day 13

SOIL AND WASTE PIPE SYSTEM

- Manhole
- Sock pit
- Sullage pit
- Silt pit
- Septic tank

Day 14

EXTERNAL DETAILS

Day 15

RAIN WATER SYSTEM

- Rain water harvesting system
- Run off water calculation
- Pit & Trench calculation
- Storm water disposal

Day 16

RAIN WATER SYSTEM DESIGN ON PROJECT

Day 17

SCHEMATIC LAYOUT FOR THE PROJECT

Day 18

SEWAGE TREATMENT PLANT

Day 19

SEWAGE TREATMENT PLANT DESIGN FOR THE PROJECT

Day 20

BOQ, ESTIMATION & TENDER

Day 21

TECHNICAL DISCUSSION

FIRE FIGHTING ONLINE TRAINING SCHEDULER

Day 1

FUNDAMENTALS

- Codes and standards
- Basic fire terminologies

Day 2

FIRE EXTINGUISHERS

- Classification of fire extinguisher
- Selection and materials used as extinguishing agent

Day 3

FIRE PROTECTION SYSTEM

- Active system
- Passive system

Day 04

FITTINGS AND VALVE ACCESSORIES

- Types of valves
- Types of fittings

Day 05

DETECTION AND ALARM SYSTEM

- Manual detection system
- Automatic detection system

FIRE FIGHTING ONLINE TRAINING SCHEDULER

Day 06

FIRE HOSE REEL & HYDRANTS

- Internal hose reel
- External hose reel
- Internal & External Hydrants

Day 07

BUILDING OCCUPANCY & HAZARD

Day 08

SPRINKLER SYSTEM

- Types of sprinklers
- Spacing of sprinklers
- Working of sprinkler system

Day 09

PIPE SIZING

- Pipe material and colour code
- Sizing of pipes
- Pipe nomenclature

Day 10

NBC CHART REFERENCE

Day 11

PUMP HYDRAULIC CALCULATIONS

- Head calculation
- Pump power calculation
- Types of pumps
- Friction Loss calculation

DNBA

FIRE FIGHTING ONLINE TRAINING SCHEDULER

Day 12

FLOOR PLAN DETAILING

- Floor detailing

Day 13

SPRINKLER LAYOUT

- Sprinkler Positioning
- Pipe sizing

Day 14

TERRACE FLOOR PLAN DETAILING (OHT)

Day 15

SUMP TANK DETAILING

Day 16

SCHEMATIC LAYOUT

Day 17

PA SYSTEM & EVACUATION PLAN

Day 18

PUMP ROOM DESIGN

Day 19

FIRE DUCT DETAILS

Day 20

BOQ, ESTIMATION & TENDER

Day 21

TECHNICAL DISCUSSION
