



DEMAND

PAVIATH INTEGRATED SOLUTION

CIVIL ENGG

CIVIL POLY

BUILDING SERVICES

Paviath ONLINE

◆ CIVIL POLY ◆ III YEAR ELECTIVE ◆ CODE CEM63.4

OBJECTIVES:

- IDENTIFY THE PRINCIPLES OF ELECTRICAL SERVICES IN BUILDINGS
- DESCRIBE ELECTRICAL LAYOUT
- EXPLAIN MECHANICAL SERVICES
- IDENTIFY FIRE PROTECTION IN BUILDING
- DESCRIBE ACOUSTICS AND SOUND INSTALLATIONS
- EXPLAIN THE TYPES OF MAINTENANCE WORK IN BUILDING
- DESCRIBE DEFECTS AND REPAIR WORKS IN BUILDING

1.1 ELECTRICAL SERVICES

CONVENTIONAL SYMBOLS FOR ELECTRICAL INSTALLATIONS - MAIN - SUB MAIN - WIRING ACCESSORIES - WIRE, CABLE, SWITCHES, WALL PLUGS, FUSES AND CUTOUPS - H.R.C TYPE, ROUND TYPE, CARTRIDGE TYPE - DISTRIBUTION BOXES, CIRCUIT BREAKER, JUNCTION BOXES - 2 PIN AND 3 PIN SOCKETS, LAMP HOLDER, CEILING ROSES, OVER SWITCHES - VARIOUS SYSTEMS WIRING - WOODEN CASING WIRING, CLEAT WIRING, CTS WIRING, CONDUIT WIRING - INSULATION - EARTHING - ELECTRICAL METERS - USE OF GENERATORS, INVERTERS, EMERGENCY LAMPS.

1.2 ELECTRICAL LAYOUT
PLANNING OF ELECTRICAL INSTALLATION AND DISTRIBUTION - PREPARATION OF ELECTRICAL LAYOUT FOR A SMALL RESIDENCE, SMALL WORKSHOP, SHOWROOM, SCHOOL BUILDING ETC - ESTIMATION OF LOAD.

2.1 MECHANICAL SERVICES

LIFTS - DEFINITION - LOCATION - SIZES - COMPONENT PARTS - LIFT WELL, TRAVEL PIT, HOIST WAY, MACHINE, BUFFER, DOOR LOCKS - SUSPENDED DROPE, LIFT CAR, LANDING DOOR, CALL PUSH - DIFFERENT TYPES OF ELEVATORS - FREIGHT ELEVATORS, PASSENGERS ELEVATORS, HOSPITAL ELEVATORS - DUMB WAITERS AND VERTICAL CONVEYORS - ESCALATORS - LOCATIONS AND FUNCTIONS - ADVANTAGES OF ESCALATORS.

2.2 AIR CONDITIONING
DEFINITION - PURPOSE - PRINCIPLES - TEMPERATURE CONTROL, AIR VELOCITY CONTROL, HUMIDITY CONTROL - AIR CONDITIONING SYSTEMS - COMPONENT PARTS - AIR PUMPS, AIR DELIVERY SYSTEM, AIR DISTRIBUTION SYSTEM - CLEANERS - FILTERS, SPRAY WASHERS, ELECTRIC PRECIPITATORS - TYPES OF AIR CONDITIONERS - CENTRAL TYPE - WINDOW TYPE - SPLIT UNIT.

3.1 LIGHTING

NATURAL AND ARTIFICIAL LIGHTING - REQUIREMENTS OF GOOD LIGHTING - DAYLIGHT PENETRATION - AIMS OF GOOD LIGHTING - GENERAL PRINCIPLES OF OPENING STOOD FOR GOOD LIGHTING - REFLECTION FACTORS - ILLUMINATION - UNITS OF MEASUREMENT - LUX, CANDELA, LUMINOUS FLUX - ORIENTATION OF BUILDINGS - EXTERNAL REFLECTED COMPONENT - INTERNAL REFLECTED COMPONENT - NECESSITY OF ARTIFICIAL LIGHTING - ARRANGEMENT OF LUMINARIES - DISTRIBUTION OF ILLUMINATION - UTILIZATION FACTOR - TEMPERATURE RISE DUE TO ARTIFICIAL LIGHTING - REMEDIAL MEASURES.

3.2 VENTILATION

DEFINITION - NECESSITY - TYPES - NATURAL / MECHANICAL VENTILATION - WIND EFFECT - FACTORS TO BE CONSIDERED IN THE DESIGN OF VENTILATION - RESPIRATION, VITATION OF AIR, AIR CHANGES, HEAT BALANCE OF BODY - GENERAL RULES FOR NATURAL VENTILATION - ADVANTAGES AND DISADVANTAGES OF MECHANICAL VENTILATION - METHODS OF MECHANICAL VENTILATION - COMBINED SYSTEMS

4.1 FIRE PROTECTION

CAUSES AND EFFECTS OF FIRE - PRE CAUTIONARY MEASURES - FACTORS TO BE CONSIDERED FOR LIMITING FIRE SPREAD AREA - CHARACTERISTICS OF FIRE RESISTING MATERIALS - GENERAL REQUIREMENTS FOR FIRE RESISTING BUILDINGS - FIRE PROTECTION SYSTEMS - FIRE EXITS - GENERAL REQUIREMENTS AS PER NBC 2005 - MAXIMUM TRAVEL DISTANCE - HORIZONTAL EXIT, ROOF EXIT / FIRE LIFTS, EXTERNAL STAIRS - FIRE FIGHTING INSTALLATIONS.

4.2 ACOUSTICS AND SOUND INSULATIONS

5.1 MAINTENANCE OF BUILDINGS

INTRODUCTION - MAINTENANCE WORKS IN BUILDINGS - PAINTING - FLOORING - SINKING OF FLOORS - DOORS AND WINDOWS - TERMITE ATTACK - SANITARY APPLIANCES - WATER SUPPLY AND DRAINAGE SYSTEM - LEAKAGES - CRACKS IN CONCRETE - TYPES - CRACKS IN WALLS - TYPES - COMMON METHODS OF CRACK REPAIR - PREVENTIVE MAINTENANCE - CORROSION OF STEEL ELEMENTS - SPECIAL PRECAUTIONS FOR REPAIRS OF BUILDING

5.2 DEFECTS AND REPAIR WORKS IN BUILDINGS

TEXT BOOK:

1. NATIONAL BUILDING CODE OF INDIA - 2005, BUREAU OF INDIAN STANDARDS, NEW DELHI
2. BUILDING CONSTRUCTION, P.C. VARGHESE, PHI LEARNING PVT.LTD, NEW DELHI

REFERENCE BOOK:

1. BUILDING CONSTRUCTION, DR. B.C. PUNMIA, LAXMI PUBLICATIONS (P) LTD, NEW DELHI
2. A TEXT BOOK ON BUILDING SERVICES, R.UDYAKUMAR, ESWAR PRESS, CHENNAI
3. BUILDING REPAIR AND MAINTENANCE MANAGEMENT, P.S. GAHLOT, CBS PUBLISHERS & DISTRIBUTORS (P) LTD, MAINTENANCE OF BUILDINGS, A.C. PANCHDHARI.



STC APM

SYLLABUS COACHING
TRAINING - 2/UNIT TRAINING
SELF - 4/UNIT ASSIGNMENT
PRESENTATION - 2/UNIT
SHOWTIME - 2/UNIT

MATHS ILLUSTRATION - GEOMETRY EXPRESSIONS



ASCON RENGA

SYLLABUS PERIOD
TRAINING - 2/2 HRS/UNIT
REMOTE - 2/2 HRS/UNIT
DURATION - SEMESTER
ONLINE/REMOTE ACCESS

MECHANICAL EXPRESSIONS - ANALYTIX CAMS



ARCADIA BIM

FEATURES
TRAINING BY IND. PROFESSIONAL
INDUSTRY APPLICATION
TRAINER OPPORTUNITY
CERTIFICATION